CONTENTS OF SUPPLEMENT.

PERSONAL 105
Obituary 105
ENGINEERING SOCIETIES 105
Coming Technical Meetings 105
NEW PUBLICATIONS 106
Trade Publications 106
CONSTRUCTION NEWS:
Condensed List of Contracts Pending 106
Railways 107
Street and Electric Railways 108
Electric Light and Power 108
Bridges 109
Buildings 109
Water-Works 110
Sewerage 111
Garbage Disposal and Street Cleaning 111
Streets and Roads 111
Manufacturing Plants 111
Miscellaneous Contracts 111
Contract Prices 112
INDUSTRIAL NOTES 112

PERSONAL.

Mr. Frank D. French has been appointed City Engineer of Woburn, Mass.

Mr. Arthur Elwood Gregory, of New York, has been appointed a Civil Engineer in the United States Navy.

Mr. Elwood Mead, M. Am. Soc. C. E., State Engineer of Wyoming, has been invited to deliver an address on irrigation at the Irrigation and Mining Convention, to be held at Baker City, Ore., this week.

Mr. Thomas Chalkley Hatton, M. Am. Soc. C. E., Engineer in Charge of Sewers, Wilmington, Del., addressed the Civic Committee of the New Century Club of Chester, Pa., March 28, on street and sewer cleaning, at an open meeting held in the Chester Free Library.

Mr. Fred. A. Kummer, C. E., until recently General Representative of the American Wood Preserving Co., Philadelphia, Pa., has resigned this position to accept that of Sales Agent of the Eastern Paving Brick Co., of Catskill, N. Y., with offices at 701 Bowling Green Bldg., New York city.

Mr. H. Walter Webb, Third Vice-President of the New York Central & Hudson River R. R., with headquarters in New York city, has resigned on account of ill health. He had held the above office for the past eight years, and since 1886 has also been the First Vice-President of the Wagner Palace Car Co.

Mr. W. G. Collins, General Superintendent of the Chicago, Milwaukee & St. Paul Ry., with headquarters in Chicago, Ill., has been appointed General Manager, to succeed Mr. A. J. Earling. Mr. H. R. Williams, Assistant General Superintendent, has been appointed General Superintendent, to succeed Mr. Collins.

M. Rubinoff, of St. Petersburg, Russia, is visiting the United States in the interest of the contractors engaged in the construction of the Trans-Siberian Ry. It is said that he will purchase a large quantity of steel rails, locomotives of the Mogul and smaller types and passenger and freight cars adapted for use in Siberia.

Mr. J. R. Megrue, Vice-President and General Manager of the Detroit, Toledo & Milwaukee R. R., with offices in Detroit, Mich., has resigned, and Mr. Calvin S. Brice, President of the Lake Erie & Western R. R., the Cincinnati Northern R. R., and the Cleveland, Akron & Columbus Ry., and First Vice-President of the Duluth, South Shore & Atlantic Ry., with headquarters in New York city, has assumed charge of the first-named road.

Capt. Albert G. Midford, inventor of the Midford system of lifting sunken vessels, has obtained nominal damages for false arrest before Justice Gaynor, of the Supreme Court of Brooklyn, against Mr. Wm. L. Kann, Vice-President of the Midford Pneumatic Salvage Co. The case grew out of the attempt to raise the steamer "Ailsa," sunk off Fort Hamilton in 1896. The failure to accomplish this purpose was ascribed largely to contention between the members of the company, and on Sept. 18, 1896, Mr. Kann had Capt. Midford, Wm. B. Powell, M. Sardou and Miss Esther De Puy placed under arrest; though they were immediately released. Miss De Puy obtained a verdict of $2,500 damages in the above case, and the others also secured nominal damages.

Mr. Edward P. North, M. Am. Soc. C. E. and Vice-President of the Society was appointed Engineer to the New York Canal Investigation Commission, on March 28. Mr. North is a well-known Civil Engineer of wide experience. He was in charge of location and construction on one of the Rocky Mountain divisions of the Union Pacific Ry.; was Chief Engineer of the Durango Ry., in Mexico, and was lately Consulting Engineer to the Department of Public Works of New York city. For a number of years past he has been in general practice as an expert and consulting engineer; and has taken much interest in road construction and in the operation of canals. He has been very active in the affairs of the American Society of Civil Engineers and has contributed largely to its published proceedings.

OBITUARY.

Mr. Trueman B. Welch, Superintendent of the Duluth Gas & Water Co. and the Commercial Light & Power Co., Duluth, Minn., committed suicide March 21, during an attack of melancholia. He was 35 years of age.

Mr. Augustus Laver, architect, of Alameda, Cal., died March 28. He designed the Parliament Buildings at Ottawa, Ont., the State Capitol at Albany, N. Y., and the new City Hall in San Francisco, Cal., among many other public buildings.

Mr. Abner Cheney Goodell, inventor, of Salem, Mass., died March 27, aged 93. He is said to have perfected the first printing press that printed on both sides of the paper in one feeding and to have been the inventor of other machinery and processes used in engraving.

Mr. Nelson W. Perry, M. Am. Inst. E. E., Electrical Engineer with Westinghouse, Church, Kerr & Co., New York, died at his residence in Brooklyn, N. Y., March 27, from the effects of bichromate of potassium, which he took by mistake for water in his laboratory on the previous night. He was 50 years of age.

Mr. Henry Augustus Fisher, Civil Engineer of Tarrytown, N. Y., died there March 24. He was born in East Retford, Nottinghamshire, England, Jan. 8, 1821, and followed civil engineering in London until 1870, when he came to America and associated himself with Messrs. Olmsted, Vaux & Withers, engineers and landscape gardeners, of New York city. In 1872 he was appointed Resident Engineer of the Tarrytown Heights Land Co.

Mr. Charles Barstow Wright, at one time President of the Northern Pacific Ry., died at his home in Philadelphia, Pa., March 23. He was born in Wyson, Pa., Jan. 8, 1822, and entered the banking business in Erie, Pa., at the age of 19. In 1843 he became interested in real estate investments in Chicago, and thus laid the foundation of his great fortune. He was the chief promotor of the Philadelphia & Erie R. R., and was the General Manager of the United Railway Companies in the petroleum regions during the oil excitement. In 1870 he became a director of the Northern Pacific Ry., and in 1874 was elected its President. He resigned in 1879 because of ill health, but continued as a director until 1883. He then became Manager and chief owner of the Washington & Columbia River Ry. His son, Mr. C. B. Wright, Jr., is President of the Rio Grande & Eagle Pass Ry., with offices at Laredo, Tex.

ENGINEERING SOCIETIES.

COMING TECHNICAL MEETINGS.

CHICAGO ELECTRICAL ASSOCIATION.
Apr. 1. "Motor Regulation and Protection," H. H. Cutler. Secy., J. R. Cravath, 825 Monadnock Block, Chicago, Ill.

THE ENGINEERS' CLUB OF PHILADELPHIA.
Apr. 2. Secy., L. F. Rondinella, 1122 Girard St., Philadelphia, Pa.

ENGINEERS' SOCIETY OF WESTERN NEW YORK.
Apr. 4. Secy., H. J. March, Library Bldg., Buffalo, N.Y.

CIVIL ENGINEERS' SOCIETY OF ST. PAUL.
Apr. 4. Secy., C. L. Annan, City Engineers' Office, St. Paul, Minn.

ENGINEERS' CLUB OF ST. LOUIS.
Apr. 6. Secy., Richard McCulloch, St. Louis, Mo.

AMERICAN SOCIETY OF CIVIL ENGINEERS.
Apr. 6. Secy., C. W. Hunt, 220 West 57th St., New York city.

WESTERN SOCIETY OF ENGINEERS.
Apr. 6. "Fireproof Construction," Wm. Sooy Smith, and "Fireproofing of Warehouses," Frank B. Abbott. Illustrated lecture on "Mexico," Wm. J. Karner. Secy., N. L. Litten, Monadnock Block, Chicago, Ill.

DENVER SOCIETY OF CIVIL ENGINEERS.
Apr. 8. Secy., W. B Lawson, 36 Jacobson Bldg, Denver, Colo.

ST. LOUIS RAILWAY CLUB.
Apr. 8. Secy., H. H. Roberts, 511 Commercial Bldg., St. Louis, Mo.

MONTANA SOCIETY OF ENGINEERS.
Apr. 9. Secy., Albert S. Hovey, Helena, Mont.

INDIANAPOLIS ENGINEERING CLUB.
Apr. 9. Secy., Edson F. Folsom, Indianapolis, Ind.

ENGINEERS' CLUB OF KANSAS CITY.
Apr. 11. Secy., F. W. Tuttle, Baird Bldg., Kansas City, Mo.

LOUISIANA ENGINEERING SOCIETY.
Apr. 11. Secy., J. F. Coleman, 712 Union St., New Orleans, La.

NORTHWEST RAILWAY CLUB.
Apr. 12. Secy., T. A. Foque, Soo Line, Minneapolis, Minn.

CIVIL ENGINEERS' CLUB OF CLEVELAND.
Apr. 12. Secy., Wm. H. Searles, Case Library Bldg., Cleveland, O.

NEW ENGLAND RAILROAD CLUB.
Apr. 13. Secy., Edward L. Jones, P. O. Box 1158, Boston, Mass.

CANADIAN SOCIETY OF CIVIL ENGINEERS.
Apr. 14. Secy., C. A. McNab, 112 Mansfield St., Montreal, Can.

ENGINEERING ASSOCIATION OF THE SOUTH.
Apr. 14. Nashville, Tenn. Secy., C. B. Wilson, Nashville, Tenn.

BROOKLYN ENGINEERS' CLUB.
Apr. 14. Secy., A. J. Provost, Jr., 191 Montague St., Brooklyn, N. Y.

ENGINEERS' CLUB OF COLUMBUS.
Apr. 16. Secy., M. S. Hopkins, 14½ N. High St., Columbus, O.

TECHNICAL CLUB OF OMAHA.
Apr. 18. Secy., J. Harry Lawrie, Omaha, Neb.

ENGINEERS' CLUB OF MINNEAPOLIS.
Apr. 18. Secy., H. E. Smith, 1620 S. E. 4th St., Minneapolis, Minn.

WESTERN RAILWAY CLUB.
Apr. 19. At Purdue University. Secy., F. M. Whyte, 225 Dearborn St., Chicago, Ill.

ENGINEERS' SOCIETY OF WESTERN PENNSYLVANIA.
Apr. 19. Secy., R. A. Fessenden, 410 Penn Ave., Pittsburg, Pa.

ENGINEERS' AND ARCHITECTS' CLUB OF LOUISVILLE.
Apr. 19. Secy., Jas K. Zollinger, 16 Norton Bldg., Louisville, Ky.

BOSTON SOCIETY OF CIVIL ENGINEERS.
Apr. 20. Secy., S. E. Tinkham, City Hall, Boston, Mass.

WESTERN FOUNDRYMEN'S ASSOCIATION.
Apr. 20. Secy., A. Sorge, Jr., 1020 Monadnock Block, Chicago, Ill.

ENGINEERS' AND ARCHITECTS' ASSOCIATION OF SOUTHERN CALIFORNIA.
Apr. 20. Secy., Frank H. Olmsted, Los Angeles, Cal.

SOUTHERN AND SOUTHWESTERN RAILWAY CLUB.
Apr. 21. Secy., F. A. Charpiot, Macon, Ga.

ENGINEERS' CLUB OF CINCINNATI.
Apr. 21. Secy., J. F. Wilson, P.O. Box 333, Cincinnati, O.

NEW YORK RAILWAY CLUB.
Apr. 21. Secy., W. W. Wheatly, 168 Montague St., Brooklyn, N. Y.

FRANKLIN INSTITUTE.
Apr. 26. "The Multiple Unit System of Electric Railways" Frank J. Sprague. Secy., Wm. H. Wahl, 15 S. 7th St., Philadelphia, Pa.

AMERICAN INSTITUTE ELECTRICAL ENGINEERS.
Apr. 27. Secy., R. W. Pope, 26 Cortlandt St., New York city.

ILLINOIS STREET RAILWAY ASSOCIATION.
May 18. Annual meeting. Secy., C. K. Minary, Springfield City R. R., Springfield, Ill.

AMERICAN FOUNDRYMENS' ASSOCIATION. — This association will hold its third convention in Cincinnati, O., June 7-10.

IRON AND STEEL INSTITUTE.—The annual meeting of the Institute will be held at the London Institution of Civil Engineers May 5-6.

AMERICAN SOCIETY OF MECHANICAL ENGINEERS.—It is announced that the spring meeting of this society will be held at Niagara Falls, beginning May 30 and continuing until June 4.

AMERICAN RAILWAY MASTER MECHANICS' ASSOCIATION AND THE MASTER CAR BUILDERS' ASSOCIATION.—The annual meetings of these two associations will be held at Saratoga, N. Y., beginning June 21 for the former and June 14 for the latter.

MONTANA SOCIETY OF ENGINEERS.—A regular meeting of this society was held Jan. 17. Usual business was transacted, including the election of 18 new members. A letter from the Engineers' Society of Western New York was read, in which certain questions were asked regarding the control of the practice of civil engineering by state legislation in Montana.

AUSTRALIAN INSTITUTE OF MINING ENGINEERS.—The annual convention of this society was held on Jan. 14 at Melbourne. Reports of the officers were received and various routine business was transacted. Officers for the ensuing year were elected as follows: Pres., H. W. Ferd; Vice Presidents, H. H. Schlapp, J. Warren, H. R. Hancock; Secy., A. S. Kenyon; Treas., E. Lidgey.

CHICAGO ELECTRICAL ASSOCIATION.—At a meeting held March 18, Mr. C. T. Gage, of Washburn & Moen Co., read a paper on the "Manufacture of Copper Wire." In the discussion insulation of jute and paper were advocated in preference to rubber for underground power circuits, and it was stated that the jute and paper insulations offered more obstruction to static discharges owing to their greater thickness. The curing of rubber cores under pressure was recommended.

ENGINEERS' SOCIETY OF WESTERN PENNSYLVANIA.—This society held a regular meeting on March 17. It was announced that the book compiled by the chemical section entitled "Methods of Analysis in Use by the Chemists of the Pittsburg Iron Works," will soon be issued and that a card catalogue of the chemical and metallurgical books in the libraries in the vicinity of Pittsburg, Pa., had been recently completed. The paper of the evening on "Food and Water Control in Hamburg, Germany, was then read by Mr. Handy.

SOCIETY OF CHEMICAL INDUSTRY.—The New York section of this society held a meeting on March 25 at Columbia University, at which Mr. Chas. E. Tripler read a paper on "The Liquefaction of Air on a Commercial Scale," which was illustrated by experiments; Mr. W. H. Birchmore one entitled "Modern Development of Electrical Furnaces for the Laboratory." Papers on the "Process for the Production of Photographic Prints on Textile Fabrics by means of Adjective Colors," by S. F. Carter, and "The Determination of Tin in Tinplate and Roofing Tin," by Robert Job, were also read.

THE INTERNATIONAL CONVENTION.—The gas, electric light and railway men of Texas and Mexico held a convention at Laredo, Tex., March 9-12. The program (Eng. News, Feb. 17, 1898), was carried out and a permanent organization, including the Texas Gas and Electric Light Association, the Texas Street Railway Association and the Mexican Gas, Electric Light and Street Railway Association was effected. The following officers were elected for the ensuing year: Pres., Carl Drake, Austin; Vice-Pres., E. H. Wells, Marshall; Secy. and Treas., F. Friesa, San Antonio. Austin, Tex., was selected as the place for the next convention.

ENGINEERS' CLUB OF PHILADELPHIA.—At the regular meeting, held March 19, various announcements were made. The topic for the evening was "Modern High Explosives," and the President, Mr. L. Y. Schermerhorn, consented to open the discussion. Experiments made by the British Government showed that 500 lbs. of guncotton, exploded 100 ft. from a vessel, would not injure it, while at 30 ft. the side-plates were driven in and the frames distorted. The destructive value of torpedoes or submarine mines, therefore, depends upon their being placed within a limited distance of the hull of a vessel. Mr. Arthur Falkenau, with the aid of photographs and blackboard illustrations, showed the results of a series of experiments made with torpedoes fired from a pneumatic gun. Other members called attention to the facility with which dynamite could be manufactured when needed; the effects of explosives in blasting, etc.

NORTHWESTERN ELECTRICAL ASSOCIATION.—At a meeting on March 14 of the committee having in charge the summer convention it was decided to accept the invitation of the cities of Duluth and Superior to visit them next June. Mr. J. M. Hill was authorized to make arrangements with any steamship company for a meeting of the association to be held en route from Chicago, via Sault Ste. Marie, Hancock and Houton, to Duluth. The plan is to hold the annual convention immediately after that of the National Electric Light Association, which meets in Chicago June 7-9. The party will board one of the large lake steamers and proceed to Duluth via the lakes, where the convention will be held. The matter is in the hands of Messrs. J. M. Hill, W. W. Low and F. E. Donohue, of Chicago.

ENGINEERS' CLUB OF CINCINNATI.—At the February meeting of the club Mr. Wm. C. Jewett read a paper on "The Construction of a Temporary Railway and the Arching of Tunnel No. 17 on the Cincinnati Southern Ry." On Feb. 16, 1889, the timber lining in this tunnel was set on fire as the result of a collision between the parts of a freight train which had broken in two. As it was evident that some days must elapse even before the tunnel could be entered for the purpose of removing the debris, it was determined to build a temporary line over the mountain for the purpose of passing trains while the tunnel was being cleaned out, and it was also decided to arch the tunnel with brick lining according to the standard of the road before resuming traffic through the tunnel.

Within 36 hours after the accident, a corps of engineers was on the ground locating the line, and in three days men and materials had been collected and construction commenced. In six days from the time of the accident the track was completed and trains in operation over the new track.

The work accomplished consisted of the following: 3,352 cu. yds. earth excavation; 3,090 cu. yds. loose rock excavation; 2,168 cu. yds. solid rock excavation; 875 lin. ft. cribbing and frame trestle from 0 to 20 ft. high, and laying, surfacing and ballasting 4,940 lin. ft. of track. The grades were 4.8 ft. and 5.0 ft., respectively, on the south and north ends, with maximum curves of 9°.

Trains were operated over this track for a period of 4½ months, during which time the tunnel was cleaned out and arched. J. F. Wilson, Secy.

FRANKLIN INSTITUTE.—At the meeting of the Mining and Metallurgical Section of the Institute, on March 23, Prof. Alexis A. Julien, of Columbia University, New York, presented a paper on "Building Stones: Elements of Strength in their Constitution and Structure." The following is a brief abstract:

In place of the care once bestowed on the selection of stone for building purposes, a general dissatisfaction with the methods of trial, and mistaken ideas of economy of time and cost, have led to great neglect of preliminary examinations of stone to be used in important constructions.

The results are shown in the speedy injury and mutilation of many great buildings throughout the country, even long before their completion. The dissatisfaction with the methods of trial is partly caused by the lack of association and mutual understanding between the professions of the architect, engineer, chemist and geologist. A satisfactory revision of the methods is called for, which must be based on the elementary characteristics of stone itself, as revealed by the investigations of modern petrography.

The strength of a stone is theoretically its power of resistance not only to compression, but to all tearing asunder of its particles by forces of frost, weathering, etc. Compressive strength and durability, however, are not synonymous, and their approach in the same stone occurs only in certain kinds, and is then largely modified by climate. Nor does the strength of stone depend to much extent upon its actual mineralogical constitution. The chief elements of strength may be concentrated in four classes.

1. Interlockment of grains, of which three stages occur: irregular aggregation, in helter-skelter disorder and with poor consolidation; parallel sorting of grains; and dovetailing or interpenetration.

2. Coherence between the grains, effected in two ways. First, cementation, mainly of the fragmental stones; Secondly, surface or capillary adhesion between the minute plates and grains, especially in the crystalline rocks.

3. Tension among the mineral grains, and the survival in stone of certain active strains which affect their strength.

AMERICAN INSTITUTE OF ELECTRICAL ENGINEERS.—The 123d meeting of the Institute was held in New York city March 23. The paper of the evening was entitled "Insulation and Conduction," by Prof. Reginald A. Fessenden, of Allegheny, Pa. Good insulation depends on two qualities: first, the ability to withstand mechanical and electrical stresses, and second, poor conducting property permitting only a small current to flow through it and leak away. For insulating telegraph, telephone and similar wires, where current and voltage are small but circuits are long, insulating materials of high ohmic resistance are required. For power transmission or lighting circuits where high voltages and large currents are the rule, dielectric strength is the main desideratum and the leakage of a small amount of current is of little consequence. Electric current passes through materials in two ways; by "actual convection" and by "conduction in solids." In the first case the transfer of current through the insulator is effected by minute particles receiving a charge and being repelled in a manner analogous to pithballs between the terminals of a Holtz machine. The second case, that of conduction in solids, starts with the assumption that the conductivities of metals are proporional to the expression, square root of elasticity divided by density all divided by the valency of the material. This equation was suggested by Prof. Fessenden in 1892 ("Science," July 22, 1892).

Conductivity in fluids and gases were also considered and the statement made that the conductivity of a solution depended upon: 1. How powerful the attraction between the molecules of the solvent and the "ions" of the solution, i. e., how many ions are set free to carry the current; 2. How fast the ions move; 3. What the valency of the ions is.

In conclusion, the weak points of the more common insulating materials were pointed out and a number of excellent suggestions useful to manufacturers of electrical apparatus of either high or low potential were offered.

In the discussion President Crocker remarked that many physicists were endeavoring to connect light, heat and electricity, and that the fore part of the paper indicated such an effort on the part of the author.

Prof. Franklin was inclined to criticise that portion based upon the molecular theory as to his mind the molecular theory should be dropped and would be in time.

Dr. Pupin considered that the experimental data now at hand does not admit of the theory of electrolytic convection, such as was argued in the paper. Nor could he understand how properties such as density and velocity could be connected in the way suggested by the writer, unless as a means of assisting the mind to grasp and memorize other facts.

NEW PUBLICATIONS.

AGRICULTURAL EXPERIMENT STATION OF COLORADO. Report for 1897. Alston Ellis, Director; L. G. Carpenter, Meteorologist and Irrigation Engineer Paper; 6 × 9 ins.; pp. 110; illustrated. Address the Director, Fort Collins, Col.

Prof. Carpenter's section of this report gives an interesting account of observations relating to seepage and evaporation, ground water levels and a great variety of meteorological records.

COAL IN ILLINOIS.—Annual report of the Bureau of Labor Statistics. Paper, 8vo.; pp. 77.

The advance sheets of the report show a total output of 20,072,758 short tons mined during the year ending July 1, 1897. Of this total, lump coal represented 14,672,241 tons, the average value at the mines being 82.2 cts. per ton for lump, and 36.5 cts. for other grades. There are 320 mining machines in use in 43 mines. The total number of employees was 33,788, of whom 25,498 were miners and 30,248 worked under ground. There were 69 men killed, or 1 man killed to 489.7 employees and to every 290,909 tons of coal mined. A supplement to the report, covering 29 pages, deals with the miners' strike of 1897. This resulted in favor of the men. The average loss of time per man was 99.88 days.

METROPOLITAN PARK COMMISSIONERS OF MASSACHUSETTS.—Report for 1897. Wm. T. Pierce, Chief Engineer, 13 Exchange Place, Boston; F. L. and J. C. Olmstead, Brookline, Landscape Architects. John Woodbury, Secretary, Boston. Cloth; 6 × 9 ins.; pp. 149; folding plates and illustrations in the text. Address the Commissioners.

This is the fifth annual report of a board which, backed by popular and legislative support, is doing a splendid piece of work for Boston and 36 other municipalities, all located within some eleven miles of the State House. There are now 6,890 acres of land, in seven parts, held under the several Metropolitan Park Acts, and some ten miles of parkways or boulevards. Besides this, plans have been made for acquiring land which, when carried out, will give this and a number of local boards control of nearly the whole extent of the banks of the Charles River and the scenery for a distance of 19 miles.

The report includes an illustrated description of a large public bath house at Revere Beach and also a reprint, without the illustrations, of the report of the late Charles Eliot, Landscape Architect, to the Metropolitan Park Commission of 1893. The report by Mr. Eliot outlined the scheme now being carried out, and presented most forcibly and charmingly the reasons for establishing the park system.

Editorial comment suggested by this report will be found elsewhere in this issue.

TRADE PUBLICATIONS.

(The standard sizes for pamphlets and trade catalogues recommended by all the principal engineering societies of the United States are: 3 1-2 x 6 ins.; 6 x 9 ins., and 9 x 12 ins.)

PULVERIZING MILL.—The Griffin Mill, Bradley Pulverizer Co., 92 State St., Boston, Mass. Pamph.; 6 × 9 ins.; pp. 24.

The mill described in this catalogue is built on the principle of a roll running against a ring or die. The roll is suspended by a vertical shaft from a universal joint, and when the shaft is rapidly rotated centrifugal force carries the roll against the die with a pressure of 6,000 lbs., which crushes the material fed to the machine.

THE DIESEL MOTOR.—History and Development of the Diesel Motor. Diesel Motor Co. of America, 11 Broadway, New York city. Two pamphlets, 6 × 9 ins.; pp. 14 and 19.

The Diesel motor was described in our issue of March 17. It is an internal combustion oil engine, which differs from all previous heat engines in first compressing a cylinder volume of air and then slowly injecting into it the fuel during a portion of the stroke. The first of the two pamphlets contains an illustrated description of the engine, and the second is a reprint of a paper read by Col. E. D. Meier before the Engineers' Club of St. Louis.

SMALL TOOLS.—The Pratt & Whitney Co., Hartford, Conn. Pamph., 4½ × 6¾ ins.; pp. 108.

This is a catalogue and price list of the small tool department of the Pratt & Whitney Co. and includes taps, dies, reamers, milling cutters, gages, etc.

SMALL TOOLS AND MACHINE SHOP SUPPLIES.—Montgomery & Co., 105 Fulton St., New York. Pamph., 4¼ × 6¼ ins.; pp. 510.

This is an illustrated catalogue and price list of a great variety of supplies, tools and machinery for all branches of the mechanical trades.

MACHINE TOOLS.—New Haven Mfg. Co., New Haven, Conn. Pamph., 9 × 6 ins.; pp. 70.

The New Haven Mfg. Co. is one of the oldest concerns in the machine tool business, being established in 18—. The catalogue illustrates lathes, planers, shapers, slotters, drilling and boring machines, etc.

STEAM AND ROTARY PUMPS.—Foster Pump Works, 26 Bridge St., Brooklyn, N. Y. Pamph., 8½ × 5½ ins.; pp. 40.

This is an illustrated catalogue of a variety of pumps, direct acting, duplex, rotary, etc., including boiler-feed, beer, ammonia, and air-lift pumps.

ASPHALT ROOFING.—The West Coast Mfg. Co., Chicago, Ill. Paper, 3½ × 6 ins.; pp. 20.

This roofing consist of layers of paper, asphalt and burlap covered on top with screened gravel. These layers are passed between rollers which compress them and form strips of finished roofing material. It is said to be both fireproof and waterproof.

WATER MOTORS.—Geo. J. Roberts & Co., Dayton, O. Paper, 3½ × 5¾ ins.; pp. 16.

The "Gem" water motor resembles a horizontal steam pump, but one cylinder is a water engine while the other is a double-acting lift and force pump. Power is obtained from city mains.

WIRE FENCING.—Shimer Woven Wire Fence Co., Anderson, Ind. Two folders, 3½ × 6 ins. and 4¾ × 6 ins.

The Shimer fence has horizontal strands of crimped wire, well secured to vertical tie wires. The company also manufactures ornamental wire fencing for lawns, private grounds, etc.

TELEPHONE SWITCHBOARDS.—The Graham Electric Co., Chicago, Ill. Paper, 5¼ × 7½ ins.; pp. 12.

This company makes a special switchboard for telephone exchanges, which has no switches, levers, push buttons or drops, all connections for ringing and listening being made by the plug in the jack.

OIL AND GAS ENGINES, TRIPLEX PUMPS, AIR COMPRESSORS.—Economic Power Co., Rochester, N. Y. Pamph., 6 × 9 ins.; pp. 28.

The engine described in this catalogue is known as the "Daniel Best" oil or gas engine. It is of the horizontal type. Over 600 are said to be at work. The pumps and air compressors are geared to the engine.

MECHANICAL STOKERS.—The Coxe Mechanical Stoking Furnace. The Coxe Iron Mfg. Co., Drifton, Pa. Pamph, 6 × 9 ins.; pp. 22.

This pamphlet illustrates a form of chain grate stoker which was patented by the late Eckley B. Coxe. It was originally designed to burn the finest sizes of anthracite coal, but it has also been found adapted to bituminous coal. A peculiar feature of the stoker is the graduation of the air supply at different parts of the grate surface so as to supply the proper amount of air at each part.

MINING MACHINERY.—The Edward P. Allis Co., Milwaukee, Wis. Pamph., 6¾ × 9¾ ins.; pp. 447.

This thick pamphlet includes five "sectional catalogues," which contain illustrated descriptions and lists of different classes of apparatus, as follows: 1. Hoisting and pumping machinery, and appliances therefor, boilers, etc. 2. Concentrators, stamp mills and machinery pertaining thereto. 3. Stamp, chlorination and cyanide mills, etc. 4. Smelters, furnaces and appliances for smelting and refining works. 5. Leyner drills, air compressors and receivers.

CONSTRUCTION NEWS.

CONDENSED LIST OF CONTRACTS PENDING WITH DATE OF OPENING BIDS.

Bids to be opened.	Work.	Place.	See Eng News
Mar. 31.	Court house bonds,	Alexandria, Va.	Mar. 24
Mar. 31.	Grading, paving, etc., Advertised, Engineering News, Mar. 24.	Eastchester, N. Y.	Mar. 24
Mar. 31.	Asphalt paving,	Cincinnati, O.	Mar. 24
Mar. 31.	Grading (21 miles),	Brazil, Ind.	Mar. 24
Mar. 31.	Water supplies,	Pittsburg, Pa.	Mar. 24
Mar. 31.	Steel fire boat,	Chicago, Ill.	Mar. 24
Mar. 31.	City hall entrance,	Chicago, Ill.	Mar. 24
Mar. 31.	Steam heating, etc.,	Central Islip (L.I.), N.Y.	Mar. 24
Mar. 31.	Asphalt and brick paving,	Minneapolis, Minn.	Mar. 24
Mar. 31.	Park supplies,	Brooklyn, N. Y.	Mar. 24
Mar. 31.	City supplies,	Pittsburg, Pa.	Mar. 24
Mar. 31.	Metal work, Advertised, Eng. News, Mar. 17 and 24.	Wade Point, N. C.	Mar. 17
Mar 31.	Transmission line franchse,	Los Angeles, Cal.	Mar. 10
Mar. 31.	Cement, Advertised, Eng. News, Mar. 10 to 24.	Portland, Me.	Mar. 10
Mar. 31.	Removing wreck, Advertised, Eng. News, Mar. 10 to 24.	Portland, Me.	Mar. 10
Mar. 31.	Sewerage system, Advertised, Eng. News, Mar. 10 to 24.	Newport News, Va.	Mar. 10
Mar. 31.	Pipe sewers,	Paterson, N. J.	Mar. 3
Mar. 31.	Riprap,	Philadelphia, Pa.	Mar. 31
Mar. 31.	Granite paving,	Newark, N. J.	Mar. 31
Mar. 31.	Highway (6,300 ft.),	Westport, Mass.	Mar. 31
Apr. 1.	Electric light plant,	Farmington, Utah	Mar. 31
Apr. 1.	Sewer (8,000 ft.),	Waterbury, Conn.	Mar. 31

Apr. 1. Brick paving, Saginaw, Mich. ..... Mar. 31
Apr. 1. Asphalt paving, Indianapolis, Ind. ..... Mar. 31
Apr. 1. Odd Fellows' home, Alton, Ill. ..... Mar. 3
Apr. 1. Superstructure, etc., Portland, Ore. ..... Mar. 3
Apr. 1. Water pipe (3,116 tons), St. John, N. B. ..... Feb. 17
Apr. 1. Boiler plant, heating, etc., Baltimore, Md. ..... Feb. 24
Apr. 1. Water pipe (12,000 ft.), Seneca Falls, N. Y. ..... Mar. 10
Advertised, Engineering News, Mar. 10.
Apr. 1. Water-works, Palmyra, N. Y. ..... Mar. 10
Advertised, Engineering News, Mar. 10.
Apr. 1. Electric light plant, Marion, Ky. ..... Mar. 17
Apr. 1. Curbing (2,000 ft.), Holyoke, Mass. ..... Mar. 17
Apr. 1. Church building, Zanesville, O. ..... Mar. 17
Apr. 1. Electric light plant, Napanee, Ont. ..... Mar. 24
Apr. 1. Paving and curbing, Worcester, Mass. ..... Mar. 24
Apr. 2. Macadam road (3,000 ft. long), Orange, Conn. Mar. 24
Apr. 2. Macadamizing (3½ miles), Eatonton, N. J. ..... Mar. 24
Advertised, Engineering News, Mar. 24.
Apr. 2. Boilers, St. Louis, Mo. ..... Mar. 24
Apr. 2. Grading, Kansas City, Mo. ..... Mar. 24
Apr. 2. Power house, Ottawa, Ont. ..... Mar. 24
Apr. 2. Pipe sewers, Milton, Mass. ..... Mar. 24
Apr. 2. Approaches, Milwaukee, Wis. ..... Mar. 17
Apr. 2. Brick paving, Evansville, Ind. ..... Mar. 17
Apr. 2. Macadamizing, etc., Cleveland, O. ..... Mar. 17
Apr. 2. School building, Brandon, Minn. ..... Feb. 3
Apr. 2. Dipper dredge, Chattanooga, Tenn. ..... Mar. 3
Advertised, Eng. News, Mar. 3 to 24.
Apr. 2. Laying water pipe, Milwaukee, Wis. ..... Mar. 31
Apr. 2. Paving and curbing, Mason City, Ia. ..... Mar. 31
Apr. 4. School building, Youngstown, O. ..... Mar. 31
Apr. 4. Repairing bridges, Charles City, Ia. ..... Mar. 31
Apr. 4. Pipe sewers, Albany, N. Y. ..... Mar. 31
Apr. 4. Pumping engine, Perth Amboy, N. J. ..... Mar. 31
Apr. 4. Pig lead, Toledo, O. ..... Mar. 31
Apr. 4. Water pipe, Milwaukee, Wis. ..... Mar. 31
Apr. 4. Paving, sidewalks, etc., Pittsburg, Pa. ..... Mar. 31
Apr. 4. Sidewalks, Meadville, Pa. ..... Mar. 31
Apr. 4. Macadamizing, etc., Passaic, N. J. ..... Mar. 31
Apr. 4. Improving streets (4), Jersey City, N. J. ..... Mar. 31
Apr. 4. Paving brick sidewalks, New Orleans, La. ..... Mar. 31
Apr. 4. Structural work, Chicago, Ill. ..... Mar. 3
Advertised, Eng. News, Mar. 3 to 17.
Apr. 4. Boiler and pump, Fargo, N. Dak. ..... Mar. 3
Apr. 4. Wharf, franchise, Summerland, Cal. ..... Jan. 27
Apr. 4. Sewer bonds ($65,000), Santa Ana, Cal. ..... Feb. 24
Apr. 4. Court house, Jonesboro, Ga. ..... Mar. 10
Apr. 4. Gas or electric lighting, Lawrenceburg, Ind. Mar. 10
Apr. 4. School building, Pipestone, Minn. ..... Mar. 17
Apr. 4. Water-works, Fort William, Ont. ..... Mar. 17
Apr. 4. Brick paving, Lancaster, O. ..... Mar. 17
Apr. 4. Street improvements, Tiffin, O. ..... Mar. 17
Apr. 4. Electric lighting, Union City, Ind. ..... Mar. 17
Advertised, Engineering News, Mar. 17.
Apr. 4. Viaduct, Atlanta, Ga. ..... Mar. 17
Apr. 4. Court house, Indianola, Miss. ..... Mar. 24
Apr. 4. Village hall, Summit, Ill. ..... Mar. 24
Apr. 4. Steel cells, Kansas City, Mo. ..... Mar. 24
Apr. 4. Lighting bonds, Fitzgerald, Ga. ..... Mar. 24
Apr. 4. Macadam paving, etc., Paterson, N. J. ..... Mar. 24
Apr. 4. Piling, Meaford, Ont. ..... Mar. 24
Apr. 4. Hospital buildings, New York, N. Y. ..... Mar. 24
Apr. 4. Railroad grading, Clinton, Mass. ..... Mar. 24
Advertised, Engineering News, Mar. 24.
Apr. 4. Water bonds, Fitzgerald, Ga. ..... Mar. 24
Apr. 5. County bridge, New Whatcom, Wash. ..... Mar. 24
Apr. 5. Water-wrks and swrs, Chamberlain, S. Dak. Mar. 10
Apr. 5. Grading, Mount Vernon, N. Y. ..... Mar. 24
Apr. 5. Naval supplies, New York, N. Y. ..... Mar. 24
Apr. 5. Naval supplies, Norfolk, Va. ..... Mar. 24
Apr. 5. Electric plant, Baltimore, Md. ..... Mar. 24
Apr. 5. Electric lighting (5 years), Carbondale, Ill. ..... Mar. 17
Apr. 5. Deep well pump, De Kalb, Ill. ..... Mar. 17
Advertised, Engineering News, Mar. 17.
Apr. 5. Power house, etc., Newark, N. Y. ..... Mar. 17
Apr. 5. Steel water-tower, Odebolt, Ia. ..... Mar. 17
Advertised, Engineering News, Mar. 17.
Apr. 5. Stone road, Toledo, O. ..... Mar. 17
Apr. 5. Lighting bonds, Wilmington, O. ..... Mar. 10
Apr. 5. County bridges, Dakotah, Ia. ..... Feb. 17
Apr. 5. Repairing floating baths, New York, N. Y. ..... Mar. 31
Apr. 5. School building, Bayonne, N. J. ..... Mar. 31
Apr. 5. Hospital building, Carthage, O. ..... Mar. 31
Apr. 5. Subway stations (3), Boston, Mass. ..... Mar. 31
Apr. 5. Paving bridge, Boston, Mass. ..... Mar. 31
Apr. 5. Steam heat (5 years), St. Louis, Mo. ..... Mar. 31
Apr. 5. Paving, Buffalo, N. Y. ..... Mar. 31
Apr. 5. Brick and stone paving, Rankin, Pa. ..... Mar. 31
Apr. 5. Paving repairs, St. Paul, Minn. ..... Mar. 31
Apr. 5. Remvg. and burng. garbage, etc., Trenton. Mar. 31
Apr. 5. Bridge, Delaware, O. ..... Mar. 31
Apr. 5. Sewer department supplies, Worcester, Mass. Mar. 31
Apr. 6. Stone jetty, Cleveland, O. ..... Mar. 31
Apr. 6. Street sprinkling, Indianapolis, Ind. ..... Mar. 31
Apr. 6. Fire engines (4), etc., New York, N. Y. ..... Mar. 31
Apr. 6. Grading, paving, etc., Indianapolis, Ind. ..... Mar. 31
Apr. 6. Jail, Fall River, Mass. ..... Mar. 31
Apr. 6. Pipe sewers (6,600 ft.), Oneida, N. Y. ..... Mar. 31
Advertised, Engineering News, Mar. 31.
Apr. 6. River work, etc., Chicago, Ill. ..... Feb. 17
Advertised, Eng. News, Feb. 17 to Mar. 10.
Apr. 6. Channel work, etc., Chicago, Ill. ..... Feb. 10
Apr. 6. Castings, bars, etc., Cincinnati, O. ..... Mar. 17
Apr. 6. Paving and grading, Cleveland, O. ..... Mar. 17
Apr. 6. Factory building, Holyoke, Mass. ..... Mar. 31
Apr. 7. Sewer system, Columbia City, Ind. ..... Mar. 17
Advertised, Eng. News, Mar. 17 and 24.
Apr. 7. Sewer bonds ($31,437), Norwood, O. ..... Mar. 17
Apr. 7. Granite paving, etc., Cincinnati, O. ..... Mar. 17
Apr. 7. Bridge (150-ft. span), Kalama, Wash. ..... Feb. 17
Apr. 7. Sewers, grading, etc., St. Joseph, Mo. ..... Mar. 24
Apr. 7. Sidewalks, Jersey City, N. J. ..... Mar. 31
Apr. 7. Park work, New York, N. Y. ..... Mar. 31
Apr. 8. Bridges, Iowa City, Ia. ..... Mar. 31
Apr. 8. Crib bulkhead, New York, N. Y. ..... Mar. 31
Apr. 8. Dredging, New York, N. Y. ..... Mar. 31
Apr. 8. Pipe sewer, Troy, N. Y. ..... Mar. 31
Apr. 8. Viaduct, Denver, Colo. ..... Mar. 24
Apr. 9. School building, Olivia, Minn. ..... Mar. 31
Apr. 9. Heating apparatus, St. Louis, Mo. ..... Mar. 31
Apr. 9. Steel truss bridge, Mansfield, Ill. ..... Mar. 24
Apr. 9. Ledge excavation, Rockland Harbor, Me. ..... Mar. 10
Advertised, Eng. News, Mar. 10 to 31.
Apr. 9. Dredging, Rockland Harbor, Me. ..... Mar. 10
Advertised, Eng. News, Mar. 10 to 31.
Apr. 9. Artesian well, Fort Washington, Md. ..... Mar. 17
Advertised, Eng. News, Mar. 17 to Apr. 7.
Apr. 10. Removing garbage, Chicopee, Mass. ..... Mar. 31
Apr. 11. Ferrules, etc., Chicago, Ill. ..... Mar. 31
Apr. 11. Building repairs, Pittsburg, Pa. ..... Mar. 31
Apr. 11. Building work, Chicago, Ill. ..... Mar. 31
Apr. 11. Concrete blocks, Duluth, Minn. ..... Mar. 17
Advertised, Eng. News, Mar. 17 to Apr. 7.
Apr. 11. Dredging, Perriwig Bar, Del. ..... Mar. 17
Advertised, Eng. News, Mar. 17 to 31.
Apr. 11. Electric lighting, Canton, O. ..... Mar. 17
Apr. 11. Highway bridges (2), Chatham, Va. ..... Mar. 3
Apr. 11. Lighting bonds, Reno, Nev. ..... Mar. 24
Apr. 11. Steel bridge, Lecompton, Kan. ..... Mar. 24
Apr. 11. Water bonds ($130,000), Reno, Nev. ..... Mar. 24
Apr. 12. Court house and vault, Giddings, Tex. ..... Mar. 24
Apr. 12. Steel gas tanks, Washington, D. C. ..... Mar. 24
Apr. 12. Grading, etc., Albany, N. Y. ..... Mar. 24
Advertised, Eng. News, Mar. 24 to Apr. 9.
Apr. 12. Removing wreck, Davis' Strait, Me. ..... Mar. 17
Advertised, Eng. News, Mar. 17 to 31.
Apr. 12. Naval supplies, Portsmouth, N. H. ..... Mar. 31
Apr. 12. Maintaining buoys, Tompkinsville, N. Y. ..... Mar. 31
Apr. 12. Macadamizing, Trenton, N. J. ..... Mar. 31
Apr. 12. Combination bridge, Trenton, N. J. ..... Mar. 31
Apr. 13. Sewers, Cleveland, O. ..... Mar. 17
Apr. 13. Paving, Cleveland, O. ..... Mar. 17
Apr. 13. Paving, etc., Ann Arbor, Mich. ..... Mar. 24
Advertised, Eng. News, Mar. 17 and 24.
Apr. 13. Brick sewers, Chicago, Ill. ..... Mar. 24
Apr. 13. Electric railway franchise, Los Angeles, Cal. Mar. 24
Apr. 14. Grading, etc., Wapakoneta, O. ..... Mar. 24
Apr. 14. Brick paving, etc., Flint, Mich. ..... Mar. 24
Apr. 14. Jail building, Glencoe, Minn. ..... Mar. 24
Apr. 14. Fenders and pile sinkers, St. Louis, Mo. ..... Mar. 17
Advertised, Eng. News, Mar. 17 to Apr. 7.
Apr. 14. City hall plans, St. Thomas, Ont. ..... Mar. 17
Apr. 14. Telephone system, Willow, Cal. ..... Mar. 31
Apr. 14. Water wheels, generators, etc., Seattle, Wash. Mar. 31
Apr. 14. Electric light plant, Harriman, Tenn. ..... Mar. 31
Apr. 14. Road work, Pittsburg, Pa. ..... Mar. 31
Apr. 15. Electric light plant, New Carlisle, Ind. ..... Mar. 31
Apr. 15. Sewer bonds ($150,000), Memphis, Tenn. ..... Mar. 17
Apr. 15. Sidewalks, Mattoon, Ill. ..... Mar. 17
Apr. 15. Lock and approaches, New Orleans, La. ..... Mar. 10
Advertised, Eng. News, Feb. 17 to Mar. 10.
Apr. 15. Grading, excavating, etc., Athens, O. ..... Mar. 24
Apr. 15. Gas and electric fixtures, Milwaukee, Wis. ..... Mar. 24
Apr. 15. Steamboat, Portland, Me. ..... Mar. 24
Advertised, Eng. News, Mar. 24 to Apr. 21.
Apr. 15. Electric light plant, Lewistown, Mont. ..... Mar. 24
Apr. 16. Water bonds ($5,000), Tripp, S. Dak. ..... Mar. 31
Apr. 16. School building, Logan, Utah. ..... Mar. 31
Apr. 16. Sewer bonds ($50,000), Spartanburg, S. C. ..... Mar. 31
Apr. 18. School building, Atwater, Minn. ..... Mar. 24
Apr. 18. School building, Vinton, Ia. ..... Mar. 24
Apr. 18. Steel bridge (100 ft.), Rosecrans, Ill. ..... Mar. 24
Apr. 18. Electric railway franchise, Riverside, Cal. ..... Mar. 24
Apr. 18. Brick sewer, Toledo, O. ..... Mar. 17
Apr. 18. Buoy service, Detroit, Mich. ..... Mar. 31
Apr. 18. Water-works, Hellertown, Pa. ..... Mar. 31
Advertised, Eng. News, Mar. 31 and Apr. 7.
Apr. 18. Water-works, bonds, etc., Tripp, S. Dak. ..... Mar. 31
Apr. 19. Town hall, Castlewood, S. Dak. ..... Mar. 31
Apr. 19. Flag, curb, etc., Passaic, N. J. ..... Mar. 31
Apr. 19. Court house bonds, Anaconda, Mont. ..... Mar. 24
Apr. 19. Water-works, Mineral Point, Wis. ..... Mar. 24
Advertised, Engineering News, Mar. 24.
Apr. 20. Water-works, Kingfield, Me. ..... Mar. 24
Apr. 20. Water-works, Auburn, Ind. ..... Mar. 10
Apr. 20. Brick building, Clemson College, S. C. ..... Mar. 31
Apr. 20. Railway (27¾ miles), Scotland. ..... Mar. 31
Apr. 21. Stand-pipe, Jeffersonville, Ind. ..... Mar. 31
Advertised, Eng. News, Mar. 31 to Apr. 14.
Apr. 21. Paving (15,000 sq.yds.), Waukesha, Wis. ..... Mar. 17
Advertised, Eng. News, Mar. 17 to Apr. 14.
Apr. 22. Canal work, Boston, Mass. ..... Mar. 31
Advertised, Eng. News, Mar. 31 and Apr. 7.
Apr. 22. Main sewer, Cleveland, O. ..... Mar. 31
Apr. 26. Naval supplies, Mare Island, Cal. ..... Mar. 31
Apr. 27. Water-works, Pittsford, N. Y. ..... Mar. 31
Advertised, Eng. News, Mar. 31 to Apr. 14.
Apr. 27. Brick and asphalt paving, Sandusky, O. ..... Mar. 31
Apr. 28. Water tunnel, intake, etc., Cincinnati, O. ..... Mar. 31
Advertised, Eng. News, Mar. 31 to Apr. 21.
Apr. 30. Town hall, Singapore, S. S. ..... Jan. 13
Apr. 30. Surfacing road (6 miles), Milton, Mass. ..... Mar. 31
Advertised, Eng. News, Mar. 31 to Apr. 14.
May 1. Plans for sewage disposal, Belper, Eng. ..... Dec. 16
May 1. Cathedral, Memphis, Tenn. ..... Mar. 17
May 1. Electric lighting, Sheboygan Falls, Wis. ..... Mar. 24
May 3. Jail, Dalton, Ga. ..... Mar. 17
May 3. Steel cells (4), Visalia, Cal. ..... Mar. 3
May 10. Levee (30 miles), Memphis, Tenn. ..... Mar. 31
May 11. County bridge, Gonzalez, Tex. ..... Mar. 3
May 18. Extending water-works, etc., Prescott, Ariz. Mar. 31
May 18. Bridges (3), Chicago, Ill. ..... Mar. 31
Advertised, Eng. News, Mar. 31 to Apr. 21.
May 25. Water franchise, Ridgewood, N. J. ..... Mar. 24
Advertised, Eng. News, Mar. 24 to Apr. 28.
June 1. Electric railway, Zurich, Switzerland ..... Mar. 10
June 24. Electric plant, Hawthorne, Australia. ..... Mar. 31
July 1. Water power, Madras India ..... Oct. 28
July 24. Buildings, Belem, Brazil ..... Mar. 24
Sept. 12. Hospital plans, San Francisco, Cal. ..... Mar. 24
No date. Dam and culvert, Pikesville, Md. ..... Mar. 24
" . Water supply, Rock Hill, S. C. ..... Mar. 24
Advertised, Eng. News, Mar. 17 to Apr. 14.

RAILWAYS.

ALAMAGORDA & SACRAMENTO.—This company has been incorporated in New Mexico with a capital stock of $900,000 to build a line from Alamagorda to the Sacramento Mountains, connecting with the El Paso & Northeastern; a distance of 20 miles. It is desired to obtain access to the timber regions of the Sacramento Mountains. The incorporators are: J. A. Eddy, H. A. Conner, J. L. Campbell, of El Paso, N. Mex.; W. A. Hawkins, and A. S. Greig.

ARKANSAS SOUTHERN.—J. W. Brown, Pres., Camden, Ark., informs us that this company has obtained the right of way for an extension of its line through Union, Lincoln, Jackson and Winn parishes, La. The people of these parishes have also voted a 5-mill tax for ten years to aid the project. It is proposed to build from Junction, Ark., to Boyce, via Vernon, Winnfield and Colfax, La., a distance of 240 miles, in order to reach deep water at Port Arthur or Sabine Pass, Tex., via Orange, Tex. J. M. Jackson, Ch. Engr., Junction, Tex.

ATLANTIC, SUWANEE RIVER & GULF.—Press reports state that this company will soon extend its line from Starke to Jacksonville, and from Starke to Tallahassee, Fla. At present the railway runs from Starke to a point west of Alachua, Fla., a distance of about 40 miles. Arthur Meigs, Treas. and Gen. Mgr., Jacksonville, Fla.

BALTIMORE & OHIO.—Thirty-one thousand tons of steel rail, ranging in weight from 75 to 85 lbs. to the yard, will be placed on this company's tracks this spring. It is expected that the work will begin by April 1 and be completed within three months. About 21,000 tons will be laid east of the Ohio River, being part of the 40,000 tons purchased last summer, and the balance being the 10,000-ton lot recently bought by the receivers for west of the Ohio River. It has been found that about 60% of the old rail is in good condition for those portions of the line where light rolling stock is used. When all this rail is laid there will be a new double track from Grafton to Baltimore, Md. W. T. Manning, Ch. Engr., Baltimore, Md.

BOMBAY & MOIRA.—This company was incorporated in New York, March 28, with a capital stock of $100,000, as an outcome of the foreclosure sale of the Saratoga & St. Lawrence R. R. The directors are: Samuel W. Foster, Knowlton, Que.; Edward C. Smith, St. Albans, Vt.; Chas. Parsons, New York; Louis Hasbrouck, Ogdensburg, N. Y.; Thomas Cantwell, Frederick D. Kilburn, Darius W. Lawrence, N. Monroe Marshall, Fred P. Wilson, Walter J. Mears, of Malone; Thos. A. Sears and Ernest G. Reynolds, of Bombay, N. Y.; John A. Ritchie, of Tupper Lake, N. Y.; William T. O'Neil, of St. Regis Falls, N. Y., and Chas. E. Brush, of Moira, N. Y.

CUMBERLAND MOUNTAIN.—Reports state that J. M. Dobbins & Co., Chattanooga, Tenn., have been awarded the contract for grading this proposed road from the Cincinnati Southern Ry. in Scott county to a point on the Nashville & Knoxville or Tennessee Central Ry. This company was incorporated Sept. 28 with a capital stock of $25,000.

DENTON, DECATUR & WESTERN.—Will A. Miller, Jr., Secy., Decatur, Tex., informs us that a bonus has been procured from Bridgeport, Tex., to aid in the building of this railway from Denton to Bridgeport. Pres., R. E. Carswell; Gen. Mgr., W. F. Buchanan, both of Decatur.

GOSHEN.—This company was incorporated in New York March 25, with a capital stock of $300,000, to build and operate a steam railway 2¾ miles long, from a point on the Erie R. R. in Goshen to a point on the company's line 1¼ miles east of the Goshen station, in Orange county. The directors are: E. B. Thomas, C. W. Buchholz, John A. A. Middleton, G. M. Cummings, O. M. F. Merrill, George B. Sownell and Edward White, of 21 Cortlandt St., New York; J. B. McCullough, Bennington Vt.; C. R. Fitch, Paterson, N. J.

KANSAS MIDLAND.—W. P. Homan, Gen. Mgr., Wichita, Kan., informs us that this railway is at present in the hands of the receivers. Nothing further has been done towards the proposed extension from Wichita to Denison, Tex., than the collection of statistics of resources of the country by the Commercial Club of Wichita, as stated in our issue of March 17.

KEOKUK & WESTERN.—Press reports state that a corps of surveyors commenced to complete surveys for the extension of this railway from Cainesville to Pattonsburg, Mo. There is trouble over the right of way and the company announces that it may make the extension from Davis City instead of from Cainesville. A. C. Goodrich, Gen. Mgr. and Ch. Engr., Keokuk, Ia.

LOUISIANA & ARKANSAS.—This company has been incorporated in Arkansas, with a capital stock of $150,000, to build a line from Stamps, Ark., to Cotton Valley, La., 24 miles distant. The incorporators are: William Buchanan and Wm. T. Ferguson, Texarkana, Tex.; J. A. Buchanan, W. C. Brown, T. A. Brown, J. C. Ferguson, M. Northcott and Robert Buchanan, Stamps, Ark.

MONROE.—Bids are asked by the Monroe Ry. & Construction Co., Monroe, La., for the construction of 80 miles of railway, from Monroe to Natchitoches, La., through a long-leaf pine country; work to begin by May 1. Pres., L. D. M. Lain; Ch. Engr., Ira W. Sylvester, both of Monroe.

PECOS VALLEY.—It is announced that the master's sale of this railway will take place at Eddy, N. Mex., on April 19. It is expected that the bondholders will buy it in, take it from the hands of the receivers, and turn it over to the new corporation, which will immediately extend it 200 miles northeast to Amarillo, Tex. Receiver, E. O. Faulkner, Eddy.

PENNSYLVANIA.—F. E. Pratt, 730 Madison Ave., Scranton, Pa., writes us that preliminary surveys were started, March 28, on a projected steam railway from Nicholson to Lanesboro, Pa., 30 miles, connecting the Delaware, Lackawanna & Western R. R., and the Erie R. R. Further extensions from Nicholson, to connect with the Pennsylvania R. R., at Buzzard's Roost, are also contemplated, thus giving a more direct route from Pittsburg to the East. A. N. Walker, Edward Gearhart and M. J. Martin, of Scranton, are organizing a company with a capital stock of $500,000. Engr., Frank Wolf, Scranton.

PHILADELPHIA & READING.—Reports state that this company's yards at Newberry Junction, Pa., will be enlarged by an additional 27 acres and new switches constructed thereon. H. K. Nichols, Ch. Engr., Philadelphia, Pa.

ST. LOUIS, TECUMSEH & LEXINGTON.—This company has been incorporated in Oklahoma with a capital stock of $800,000 to build a line from Stroud to Lexington, Okla., a distance of 90 miles, in order to open up valuable coal, asphalt and mineral deposits. The incorporators are: D. B. Madden, Fred. Scott, Thomas McColgan and W. T. Harness.

SAN FRANCISCO & SAN JOAQUIN VALLEY.—It is reported that this company has secured a route for its line out of Stockton, Cal. A survey has been selected which will necessitate the construction of a bridge 1,300 ft. long, including some heavy trestling, over the Kern River. W. B. Storey, Jr., Ch. Engr., San Francisco, Cal.

SCOTLAND.—Bids are asked by the Callander & Oban Ry. Co., 58 Bath St., Glasgow, Scotland, until April 20, for the construction of an extension from Connel Ferry to Ballachulish, with bridges across Loch Etive and Loch Creran, about 27¾ miles in length. Formans & McCall, C. E., 160 Hope St., Glasgow, can give further information.

SHELBYVILLE & BLOOMFIELD.—This company was incorporated in Kentucky, March 22, with a capital stock of $10,000. The incorporators are: Samuel Spencer, Josiah Hill, 80 Broadway, New York; Geo. R. Loyal, A. Humphrey and others; all officials of the Southern Ry. Co.

SNAKE RIVER VALLEY.—Reports state that three engineering parties are making surveys for the proposed line between Lewiston and Riparia, Idaho, along the Snake River, a distance of about 60 miles. Pres., Henry Failing, Portland, Ore.; Counsel, F. W. Kettenbach, Lewiston, Idaho.

STOCKTON & TUOLUMNE.—Reports state that final surveys have been commenced on this proposed railway from Stockton to Summerville, via Copperopolis, Cal., a distance of 65 miles. Erickson Bros. are the principal contractors. Further information may be found in our issue of Feb. 19. Pres., Mrs. Annie Kline Rikert; Ch. Engr., Henry A. Brainerd, both of Grand Hotel, San Francisco, Cal.

TORONTO & HUDSON BAY.—This company has been incorporated by the Canadian government, with a capital stock of $1,000,000. This line, which is known as the James Bay Ry., is expected to run from Toronto, Ont., to James Bay, via Barrie, Waubaushene, and Bala. The Canadian Pacific Ry. Co. is said to be interested.

WAYCROSS AIR LINE.—B. A. Denmark, Pres., Savannah, Ga., informs us that J. S. Bailey & Co. have contracted to build an extension of this line from Nicholls to Douglas, Ga., a distance of 12½ miles. Construction is to begin April 1 and be completed by September 1. The work has been sub-let to J. H. Powers. The present route is from Waycross to Nicholls, 30 miles. Supt., L. Johnson, Waycross, Ga.

YAZOO DELTA.—W. A. Shippey & Co., Memphis, Tenn., are reported as having received a contract for clearing and grading for an extension of this road from Ruleville to Tutwiler, Miss., a distance of about 20 miles. The present line is 21 miles in length, from Moorhead to Ruleville, Miss. Pres., Chester H. Pond; Gen. Mgr., C. H. Rock, of Moorhead, Miss.

STREET AND ELECTRIC RAILWAYS.

PORTLAND, ME.—It is reported that the Portland & Cape Elizabeth Ry. Co. contemplates an extension of its track from the present terminus at Cape Cottage. H. R. MacLeod, Gen. Mgr.

WALTHAM, MASS.—The aldermen of this town have granted a franchise to the Newton St. Ry. Co. to build a line to Lexington. Supt., F. G. L. Henderson, West Newton, Mass.

WEBSTER, MASS.—The Webster & Dudley St. Ry. Co. has been incorporated, with a capital stock of $50,000, to build between the towns named, a distance of 6 miles. The temporary directors are: Edgar S. Hill, John Flint, L. R. Eddy, Geo. R. Merble, Cypried Dandurand, Charles Haggerty and Oscar Shumway, all of Webster.

WORCESTER, MASS.—W. H. Tylee, of Worcester, informs us that work will begin at once on the proposed Worcester & Clinton St. Ry. The length of the route, via Boylston, is 12 miles, and Mr. Tylee holds the contract for building and equipping the line. Pres., A. S. Paton, Leominster, Mass.; Ch. Engr., O. W. Rugg, Worcester.

BALDWINSVILLE, N.Y.—W. M. Mullin, Village Clk., informs us that the surveys have been made for the proposed electric railway of the Baldwinsville & Liverpool Ry. Co., whose incorporation was reported in our issue of last week. Neither the engineer's report nor the map of the route has yet been received.

BUFFALO, N. Y.—Mason D. Pratt, Vice-Pres. Buffalo Valley Ry. Co., Steelton, Pa., informs us that surveys have been completed and right of way is now being obtained for this proposed electric railway from Buffalo to Strykersville, via Elma, Marilla, Porterville and Wales, a distance of 27 miles. The capital for construction has been partly obtained. We are also informed that it is not yet known when contracts will be let, but it will not be before the entire right of way has been secured, probably in June. Notice of incorporation may be found in our last issue. Pres., Edgar C. Felton, Steelton, Pa.; Ch. Engr., Geo. A. Ricker, 704 Ellicott Square, Buffalo.

LOCKPORT, N. Y.—The Buffalo & Niagara Falls Electric Ry. Co. is said to have leased the Erie tracks from Tonawanda to Lockport, and that an electric motive system will be used to operate the line. Burt Van Horn, Gen. Mgr., Niagara Falls, N. Y.

PORT JERVIS, N. Y.—The contract for building a new power-house, car barn and steel bridges for the Port Jervis Electric Ry. Co. has been awarded to the Berlin Iron Bridge Co., of East Berlin, Conn. The buildings will be entirely fireproof, and covered with the bridge company's patent anti-condensation corrugated iron; the bridges are plate-girder type constructed for heavy use.

CAMDEN, N. J.—Press reports state that surveys have been completed for the proposed electric railway of the New Jersey Electric Ry. Co., from Camden to Atlantic City, via Haddonfield, Gibbsboro, Pleasant Mills, Port Republic and Absecon, N. J. The survey is west of the West Jersey & Seashore R. R., and it is expected to use the third-rail system.

ELIZABETH, N. J.—Governor Voorhees signed the bill, March 25, which is designed to enable the board of freeholders of Union county to sell outright the trolley franchise from Elizabeth to Plainfield for a term of 75 years. The bill will also enable the freeholders to build a wide boulevard between these cities.

PHILADELPHIA, PA.—Reports state that work on the extension of the Philadelphia, Castle Rock & West Chester Ry., from Newtown Square to West Chester, is expected to be completed shortly. When finished the line will be 20 miles in length, exclusive of 5 miles of turnouts. This road is said to be practically a continuation of the Philadelphia & West Chester Traction Co.'s line in operation from 63d and Market Sts. to Newtown Square. Pres., J. M. Shimer; Secy., W. S. Taylor, 672 Bullitt Bldg.

BALTIMORE, MD.—The uncompleted Columbia & Maryland Electric Ry., between Baltimore and Washington, known as the Boulevard line, was sold at auction, March 25, to the Baltimore Security & Trading Co. at $450,000. It is said that the road will be reorganized, but will not be operated through to Washington for some time.

FROSTBURG, MD.—The county commissioners, March 22, granted a franchise for the use of the county roads to the Frostburg & Lonaconing Electric Ry. Co. and the Lonaconing & Western Ry. Co., but withheld for the present the franchise for the Cumberland & Frostburg Electric Ry. Co. All three companies are controlled chiefly by John W. Burchinal and James E. Hooton, of Moundsville, W. Va.

RALEIGH, N. C.—The aldermen have decided to build a tramway out on Hargett St. to the rock quarry, for bringing paving stone to the city. It is estimated that the materials will cost $4,000, and the putting down, $550. Little grading is necessary. Work is to begin at once.

CLEVELAND, O.—The Cleveland, Burton & Eastern Electric Ry. Co. has been organized, with a capital stock of $1,250,000, to build a line east from Cleveland to Gates Mills, Lake Punderson & Burton. Among the incorporators are: E. G. Tillotson, H. Clark Ford, H. A. Sherwin, Howard White, Chas. L. Pack and R. A. Harman, all of Cleveland.

SOUTH BEND, IND.—Press reports state that the South Bend & Elkhart Electric Ry. Co. was incorporated March 23, with a capital stock of $100,000, with $10,000 paid in. It is expected to begin work on extending the line from Mishawaka to Elkhart, 12 miles, as soon as Elkhart grants a franchise for the use of certain streets. The incorporators are: Arthur Kennedy, J. McM. Smith, Frank Dunnahoo, A. L. Brick and DeWitt Dilworth.

CHICAGO, ILL.—Mr. Portman has introduced an ordinance in the board of aldermen granting permission to the Chicago, Milwaukee & St. Paul Ry. Co. to use electric or other power for operating the Evanston division of its line.

ROCKFORD, ILL.—The supervisors of Winnebago county, March 25, granted a 25-year franchise to the Rock River Electric Ry. Co. E. M. Hopkins, Pres., 33 Monroe St., Chicago, Ill., informs us that contracts for constructing the proposed line will be let within 30 days. The route is from Rockford to Sterling, via Elida, Byron, Grand de Tour and Dixon, 60 miles. Sandford Keely, Ch. Engr., Old Colony Bldg., Chicago.

FARMINGTON, WIS.—Irving P. Lord and W. B. Baker, of Waupauca, Wis., have obtained a 50-year franchise from this town for an electric railway 5 miles in length, to be completed by July 1.

KENOSHA, WIS.—Fred. S. Comstock, of Chicago, is said to have received a franchise to construct and operate an electric railway in this town.

HELENA, MONT.—It is reported that an English syndicate has purchased the Snow Shoe mine, and that it will build a tramway to connect the mine with Snow Shoe Creek. It will also run a main working tunnel 1,000 ft. further down the mountain. Complete railway connections will be made.

WALKERVILLE, MONT.—Reports from Butte, Mont., state that Winters, Parsons & Boomer have been awarded the contract for grading for a new street railway line to Walkerville, and that the contract for erecting trestles was given to Perham Bros. Manager Wharton says that grading will be completed by May 1.

NEVADA, MO.—C. N. Hammond & Co., Kansas City, have purchased the new franchise for the Nevada Electric St. Ry.

ST. LOUIS, MO.—The St. Louis, Clayton & Creve Coeur Lake Ry. Co. has petitioned the county court for a franchise for an electric railway in the suburbs of St. Louis. G. S. Baumhoff is manager of the Lindell system, which is said to be back of the project.

FORT SMITH, ARK.—Samuel McLoud, of Fort Smith, who has the contract for building an electric railway, etc., in this town, informs us that the company is not yet ready to let contracts, but will be about April 10. Six miles of railway must be in operation by March 7, 1899. Further information may be found in our last issue.

PINE BLUFF, ARK.—The city council of this place has contracted with Nat Covington, owner of the electric light and power plant of Peru, Ind., and Wilber W. Harrison, of Anderson, Ind., to build an electric railway and an electric lighting plant. W. P. Grace, 110½ Main St., Pine Bluff, is said to be interested.

DENVER, COLO.—The Denver Consolidated Tramway Co. is said to contemplate improvements to its system which will cost about $400,000. New 72-lb. rail will soon be laid on 15th St., on creosoted ties; and it is proposed to build one large power house, to replace the three in present use, and to equip it with the latest improved machinery. Secy., Wm. G. Evans.

LOS ANGELES, CAL.—A. B. Patton, Ogden, Utah, has petitioned the county supervisors for a franchise to build an electric railway from this city to Whittier, along the new Los Angeles and Whittier Road.

PASADENA, CAL.—Walter S. Maxwell, Pres. San Gabriel Valley Traction Co., Los Angeles, Cal., informs us that surveys are now being made for this proposed electric line from Los Angeles to Pasadena, with a branch line to Alhambra, San Gabriel, Sierra Madre, Monrovia and Duarte, Cal., a distance of 22 miles. Franchises are being secured, and contracts will soon be let. All the necessary capital has been subscribed. S. P. Jewett, Ch. Engr., Pasadena, Cal.

FAIRFIELD, UTAH.—It is reported that the Salt Lake & Mercur R. R. has been bought by Chicago parties, and that it is expected to install electricity on the line, at a cost of $60,000. The present length of the road is 16 miles, running from Fairfield, on the Oregon Short Line, to the Mercur mining camp. Pres., E. H. Airis, Salt Lake City, Utah.

ELECTRIC LIGHT AND POWER.

EXETER, N. H.—J. M. Wadlin, Jr., Selectman, writes us that this place has not appropriated funds for a plant.

LAWRENCE, MASS.—We are informed as follows regarding the proposed municipal plant for this city: A committee from the council was formed early in February, with instructions to investigate as to the advisability of procuring a municipal plant for lighting by electricity. This committee reported March 21, in the council, and the report was favorable. Immediately after the reading of the report an order was adopted by the council making it expedient for the city to procure a municipal electric light plant, and that order was sent to the board of aldermen March 28. The committee is composed of Aldermen Matthes, Miville and Lynch; Councilmen Frederick A. Carr, Randleet and Daly.

METHUEN, MASS.—The question of erecting a municipal plant is being considered. C. Dudley Holman, Chn. Com.

MILFORD, MASS.—The question of constructing a plant for the Milford Light, Heat & Power Co. has not been definitely settled. Des. Engr. and Gen. Supt., Alfred Clarke, 89 State St., Boston.

GENEVA, N. Y.—Bids are asked until April 15 for lighting the streets with electricity for three or five years, according to reports. W. E. Stubbs, Chn. Com.

PLUM ISLAND, N. Y.—We are informed that the following bids were received by Maj. Smith S. Leach, U. S. Engr., New London, Conn., on March 24, for electric lighting and power installation on Plum Island, as advertised in Engineering News:

	(1)	(2)
Clark & Mills, Boston, Mass	$2,000	$3,150
Geo. F. Woolstron, New York	*1,695	3,092
New Jersey Fdy. & Machine Co., New York.	1,831	*2,710
Sprague Electric Co., New York	1,832	3,140
J. B. Buchanan & Co., New York	2,222	3,333
De La Verne Ref. Co., New York	1,832	
Brown Elec. Con. Co., New Haven, Conn.	1,832	4,500
McCary Engineering Co., Baltimore, Md.	1,832	2,997
Manhattan Supply Co., New York	....	2,895

(1) Hornsby-Akroyd oil engine with belt. (2) Electric apparatus complete.
*Lowest bids; recommended for acceptance; aggregating $4,405. Amount available for above work, $4,500.

CRANFORD, N. J.—The Cranford Electric Light & Water Co. has applied for a 99-year franchise.

PITMAN GROVE, N. J.—Pitman Grove, Glasboro & Clayton Electric Light & Power Co.'s plant at Reeve's Mill was sold at receiver's sale March 18 to Manessas Triechler, of Philadelphia, for $3,100, subject to judgments of $1,900. Other claims are reported to amount to about $6,000. The plant originally cost $16,000. The sale includes a franchise at Clayton, Mantua and Wenonah. Blair Smith, Mgr., Wenonah, N. J., writes us that the plant will be enlarged; both arc and incandescent lights being used.

PHILADELPHIA, PA.—The council has adopted an ordinance authorizing Director Riter, of the department of public safety, to submit estimates within 60 days for a municipal plant of 2,000 arc lights.

TAKOMA PARK, D. C.—This place has been authorized to issue $40,000 in bonds for a plant, water-works and a sewerage system. S. S. Shedd may be addressed.

WASHINGTON, D. C.—The United States Electric Lighting Co. will probably soon begin to extend and improve its plant at a cost of about $350,000.

BALTIMORE, MD.—The second and first branches of the council are considering resolutions directing police committee to consider the advisability of erecting a municipal plant and of directing the mayor, controller and register to advertise for bids for constructing a plant, respectively. Councilmen Hock and Treibler may be addressed.

OAKLAND, MD.—The council in favor of issuing bonds for a plant and water-works will qualify about April 1. The council will not take up the question of construction, however, before May 7. Councilman E. M. Spedden may be addressed.

WILLIAMSPORT, MD.—M. E. Cullen, Town Treas. and a member of the committee, writes us that the matter of erecting a plant will probably be decided upon before that of constructing water-works, for which bonds were voted on March 7. Population, 2,000.

GREENWOOD, S. C.—The General Electric Co., Schenectady, N. Y., are reported to have been awarded the contract for constructing a plant, at $8,277.

MIAMI, FLA.—It is reported that a plant will be built in this place this season.

McCOMB, MISS.—C. C. Jarvis, Mayor, writes us that this place will vote April 18 on the question of building a plant of 40 2,000-c. p. arc and 2,000 16-c. p. incandescent lights; estimated cost (probably with water-works), $80,000. Engrs., Sanders & Porter, Columbia Bldg., Louisville, Ky.; T. W. James, Chn. Com.

WESSON, MISS.—The question of building a plant is being considered. Mayor, H. M. Buckley; Cy. Clk., A. Fairly; Chn. Com., H. A. Earns.

HARRIMAN, TENN.—Bids are asked until April 14 for constructing an incandescent light plant; estimated cost, $5,000. Cy. Clk., D. W. Thomas; Treas., C. E. Hendrick.

MARTIN, TENN.—Chas. A. Cashon, Recdr., writes us, under date March 21, that contracts have been let for everything in connection with the proposed plant, except ing the engine; estimated cost, with water-works, $25,000. Des. Engr., E. E. Davis, Paris, Tenn.

TRACY CITY, TENN.—It is stated that private parties are preparing to put in a plant in this place.

HENDERSON, KY.—Mayor Thompson and the committee, R. P. Farnsworth, Chn., are reported as investigating the question of building a plant.

COLUMBUS, O.—The board of public works has decided to call for new bids for constructing the proposed municipal plant, bids for which were to be opened March 24.

MINERAL POINT, O.—Paul Voorhees, 1210 Guaranty Bldg., Buffalo, N. Y., has been engaged to prepare plans and specifications for a plant and water-works; the plant will cost $5,000.

POMEROY, O.—The Mutual Electric Light Co. has been granted a 25-year franchise for furnishing this place with light. Geo. Pfarr, H. C. Pownall and Geo. Cowle compose the company.

NEW CARLISLE, IND.—Bids are asked by the city clerk until April 15 for constructing a plant, according to reports.

CARSON CITY, MICH.—It is stated that this place wants propositions for furnishing about 45 arc and 2,000 incandescent lights for a term of years. A. B. Goodwin, Clk.

DETROIT, MICH.—A local paper states that the lighting committee of the council has decided to submit a report approving the estimates of the lighting commission and to recommend the extension of the lighting system by 200 lights. The estimates as submitted are $111,000 for operation and maintenance, less the surplus, $42,000. The additional 200 lights are estimated at $53,500.

HARBOR SPRINGS, MICH.—It is stated that this place is about to issue $6,000 in bonds for a plant.

CHICAGO, ILL.—Jackson & Hogan, 70 La Salle St., are reported to have been awarded the contract for placing the conduits and setting poles in Humboldt Boulevard at $6,003.

PECATONICA, ILL.—We are informed that the plant for the Pecatonica Light Co. has been erected. Two 62-in. Leffel wheels are in place. Steam power will also be used to operate the plant. It will have 48 arc and 1,500 incandescent lights; estimated cost, $15,000. Des. Engrs., Brownell & Shedd, Elgin, Ill.

UTICA, ILL.—John L. White, Lenore, Ill., has been granted a 20-year franchise for a plant and water-works, as advertised in Engineering News.

SUPERIOR, WIS.—The proposed municipal plant will have a power house 50 × 100 ft., 3 125-HP. compound condensing engines; 3 16 × 72 ins. water tube boilers; 3 100 arc light dynamos, one 150 incandescent light alternator together with all necessary appurtenances for the generation and distribution of the electricity; estimated cost, $75,000. John McGrath, Chn. Com.; E. B. Banks, Cy Engr.

NEOLA, IA.—Bids are asked by W. H. Killpack, Chn. Com., for constructing a plant to cost about $5,000, according to reports; check, $200.

SAC CITY, IA.—The plant to be built by the Sac City Electric Co. will cost $12,000. D. E. Hallett and Asa Platt are on the purchasing committee.

BARNESVILLE, MINN.—Chas. S. Marden, Attorney, writes us that nothing can be done in regard to the proposed plant for at least 90 days. A new charter will have to be adopted by the people before bonds may be issued. The plant will have 5 arc and 500 incandescent lights. Engr., Chas. F. Loweth, 94 E. 4th St., St. Paul.

BARK RIVER, N. DAK.—Geo. F. Honey, Cy. Audr., writes us that the committee has decided to install a plant during the summer.

ST. JOSEPH, MO.—Local papers state that a new engine and other machinery is proposed for the city plant. W. C. Stewart, Cy. Electrician.

ST. LOUIS, MO.—Bids are asked until April 5 for furnishing the board of education building with electric current for five years, and also 500 volts for elevator and fan purposes. Wm. B. Ittner, Comr., Board of Education Bldg.

PINE BLUFF, ARK.—Wilber W. Harrison, of Anderson, Ind., and Nathaniel Covington, Secy. and Treas., Peru Electric Light Co., Peru, Ind., have been granted a 50-year franchise and also awarded a 10-year contract for lighting this place. Mr. Covington writes us that the plant will have capacity for 300 arc and 4,000 incandescent lights. The franchise includes a street railway eight miles long.

FORT SMITH, ARK.—Bids will be asked about April 9 for constructing a plant of 80 2,000-c. p. arc lights and six miles of street railway. Samuel McLoud, who has the franchise, as noted in our issue of last week, writes us that 70 arc lights have to be put in operation by July 10. Estimated cost, $65,600.

STUTTGART, ARK.—We are informed that the water-works for the Stuttgart Water & Electric Light Co. will be put in before the electric plant. A franchise for 30 years has been granted. Specifications are being prepared. Capital stock, $10,000. Chas. Williamson, Pres. and Gen. Mgr.

CRIPPLE CREEK, COLO.—Press reports state that the Florence & Cripple Creek R. R. Co. is considering bids for furnishing machinery for a light and power plant of 2,250 HP.; estimated cost, $250,000. Syl. T. Smith, Pres.

SILVERTON, COLO.—C. H. H. Kramer, Mayor, writes us that an election will be held April 5 to vote on the question of issuing bonds for the proposed plant, to cost about $10,000.

CLARKSVILLE, TEX.—It is proposed to construct a plant of 40 arc and 1,000 incandescent lights, according to reports. John M. Mims may be addressed.

MANOR, TEX.—The Manor Artesian Well Co. will build a plant, according to reports.

SEATTLE, WASH.—Bids are asked until about April 15 for furnishing the Snoqualmie Falls Power Co. with water-wheels, generators, wire and transformers. The plant, described in our issue of last week, will cost about $200,000. Engr., Thos. T. Johnston, Security Bldg., Chicago; Pres., Chas. H. Baker, Seattle.

CLOVERDALE, CAL.—T. B. Wilson, Town Clk., writes us that after the election on April 11 steps will probably be taken to call an election to vote on the question of issuing bonds for a municipal plant and water-works. The old plant, owned by T. Albertz, was recently destroyed; it will likely not be rebuilt.

LOMPOC, CAL.—The Alcatraz Co., San Francisco, Cal., and 57 E. 59th St., New York, is reported to have decided to build a power and light plant at its works here.

SAN ANDREAS, CAL.—T. S. Bullock is reported to have been granted a 50-year franchise for operating a plant in this county. J. R. Smith, Chn. Supervisors.

SAN FRANCISCO, CAL.—Prince Poniatowsky is at the head of a company which proposes within a year to bring to this city about 10,000 HP. from the waters on the western slope of the Sierra Nevada Mountains, in Alpine, Amador and Calaveras counties, by means of an electrical line 110 miles long. The water supply embraces the Blue Lake Water Co.'s system in these counties, which consists of a number of lakes and artificial reservoirs. A system of canals will convey the water to the point of its conversion into electrical power. The wire will cross San Francisco Bay at an elevation of 325 ft. over the shallow waters opposite San Leandro. The cost of the plant is estimated at about $1,000,000. Address W. M. Angus, Secy. Standard Electric Co. of California, San Francisco.

PROVO, UTAH.—S. S. Jones, Mayor, writes us that this city is considering the advisability of putting in a municipal plant; no appropriation has yet been made. The Provo Opera House Co. is also considering the question of putting in a heating and light plant for its building; seating capacity, 860. Population, about 6,000. Descriptions and prices of machinery are wanted.

FARMINGTON, UTAH.—Bids are asked until April 1 for constructing a plant of 15 arc and 400 incandescent lights; estimated cost, $5,000. We are informed that the plant is to furnish light and power for the pleasure resort "Lagoon," and for Farmington. Elec. Engr., E. A. Vail, Salt Lake City. Simon Bamberger is the owner.

MANIWAKI, QUE.—Chas. Logue writes us that it is likely nothing will be done in regard to the proposed plant before summer.

HAWTHORN, VICTORIA, AUSTRALIA.—Bids are asked until June 24 for constructing a complete plant, according to reports. Henry T. Haynes, Engr. and Town Clk.

NEW COMPANIES.—Litchfield Light & Power Co., Litchfield, Conn.; Pres., Geo. S. Elmore; Secy. and Treas., W. E. Grannis. The plant is already built.

Southern California Power Co., of Redland, Cal.; $400,000; Henry Fisher, H. H. Sinclair, E. G. Judson, E. P. Morrison, J. A. Fisher. This company proposes to operate a plant at Redlands and to supply Los Angeles and Pasadena with electricity.

Peninsular Electric Light & Power Co., Orlando, Fla.; $12,000 paid in; B. C. Abernathy, W. B. Tucker.

Electric Power & Light Co. of Baltimore county, Baltimore, Md.; $25,000; Harry Heidel, Wm. H. Mathali, Baltimore county; James C. Doyle, Baltimore.

Newport Electric Light & Power Co., Newport, Ore.; $3,000; Wm. Matthews, R. A. Bensall, Newport.

Carbondale Heat & Power Co., Carbondale, Pa.; $100,000, with $10,000 paid in; Treas., Martin P. Flynn, Scranton, Pa.; C. E. Spencer, Carbondale.

Cosmopolitan Construction Co., Chicago, Ill., $500,000; to build a power house, 200 × 150 ft., at 20th and Grove Sts., for the Cosmopolitan Electric Co.; Chas. R. Holden, Alfred S. Austrian, Carl Mayer, of the law firm of Moran, Kraus & Mayer.

BRIDGES.

ALBANY, N. Y.—A bill is before the legislature authorizing the appropriation of $10,000 for constructing a bridge over the Erie Canal on the Marsh Road.

OLEAN, N. Y.—E. E. Allen, Supt. Sts., informs us that the following bids were received March 22 for constructing a steel bridge, advertised in Engineering News:

New Jersey Steel & Iron Co., Trenton, N. J.	$7,750
Pittsburg Bridge Co., Pittsburg, Pa.	7,300
Bellefontaine Bridge & Iron Co., Bellefontaine, O.	7,220
Lane Bridge Works, Painted Post, N. Y.	6,843
Havana Bridge Works, Montour Falls, N. Y.	6,840
Horseheads Bridge Co., Horseheads, N. Y.	6,776
Toledo Bridge Co., Toledo, O.	6,770
Variety Iron Works Co., Cleveland, O.	6,639
Penn Bridge Co., Beaver Falls, Pa.	6,200
Brackett Bridge Co., Cincinnati, O.	5,975
Groton Bridge & Mfg. Co., Groton, N. Y.	5,795
King Bridge Co., Cleveland, O.	5,674
Wrought Iron Bridge Co., Canton, O.	5,110
Buffalo Bridge & Iron Works, Buffalo, N. Y.	4,840

BUFFALO, N. Y.—A bill has passed the assembly authorizing the construction of a bridge over the Erie Canal, at a cost of about $34,000.

SENECA FALLS, N. Y.—A bill appropriating $8,000 for the construction of a bridge over the Seneca River at Rumsey St. has been introduced by Assemblyman Wm. Van Rensselaer.

ROME, N. Y.—A bridge will be constructed over the Erie Canal at South George St.; estimated cost, $8,000.

UTICA, N. Y.—A bill by Assemblyman Williams has been passed authorizing a bridge to be constructed over the canal, to cost $18,000.

LA FAYETTE, N. J.—Plans were presented to the La Fayette Citizens' Association March 21 for the construction of the Lehigh Valley R. R. bridge over the Morris and Essex Canal at Pacific St., to be of iron, 85 ft. long and 60 ft. wide, on stone abutments. A. H. Konkle, County Engr.

TRENTON, N. J.—Bids are asked by the board of freeholders until April 12 for constructing a combination steel, brick and concrete bridge over Gold Run Creek on the Trenton and Ewing Turnpike, surety $100. Geo. L. Howell, Chn. Com.

MOSGROVE, PA.—Reports state that plans have been prepared for the Allegheny & Western R. R. bridge across the Allegheny River, to be 1,220 ft. long.

WILLIAMSPORT, PA.—A contract has been awarded to M. M. Perry, Williamsport, at $1,350, to construct a bridge at Fairfield township and one at Moreland township.

NORTHEAST, MD.—The Edgemoor Bridge Co., Wilmington, Del., has been awarded a contract to construct a bridge across the Pennsylvania R. R. tracks at this place.

PETERSBURG, VA.—Reports state that the Norfolk & Western R. R. Co. is considering the question of the construction of a new iron bridge to replace the old one, near this city. C. S. Churchill, Engr., Roanoke, Va.

CHARLESTON, S. C.—Reports state that the county commissioners have decided to construct a bridge across Rantowles Creek.

CHILLICOTHE, O.—A. W. Jones, County Engr., writes us that the three-span iron bridge at this place, with two piers and one abutment, was washed into the Scioto River by the high water on March 24. The foundations were on piles driven to a solid bearing on shale 24 ft. below low water. The great volume of water forced through the three spans caused the channel to scour so the piers and abutment toppled over. The iron bridge was built a year ago to replace an old wooden structure that was burned. The stonework was built 20 years ago.

DELAWARE, O.—Bids are asked until April 5 for constructing a bridge over the Delaware Run on South Franklyn St. E. E. Naylor, Cy. Clk.

YOUNGSTOWN, O.—F. M. Lillie, Cy. Engr., informs us that an iron bridge will be constructed, 1,200 ft. long and 40 ft. wide, over the Mahoning River at South Ave. Address David M. Wise, County Surv.

BLOOMINGTON, ILL.—Plans have been prepared for the construction of a viaduct over the Chicago, Cincinnati, Cleveland & Omaha R. R. and the Lake Erie & Western R. R. The contract will soon be let. Address W. P. Butler, Cy. Engr.

CHICAGO, ILL.—Bids are asked by the sanitary district trustees until May 18 for constructing two bridges for the Atchison, Topeka & Santa Fe Ry. Co., one across the drainage canal and the Des Plaines River and a bridge over the canal at Kedzie Ave.; surety $4,000, as stated in our advertising columns. James Reddick, Clk.

URBANA, ILL.—The following bids were received March 22 for constructing four highway bridges:

	80 × 14 ft. span with 103 yds. of stone masonry.	50 × 14 ft. span with 39 yds. of stone masonry.	34 × 14 ft. beam bridge with 56 yds. of stone masonry in 20 × 14 ft. beam with 30 yds. of stone masonry.
Wrought Iron Bridge Co.	$1,676	$865	$683 $405
Canton Bridge Co.	1,578	772	689 392
Wabash Bridge Co.	1,666	798	714 381
Carmichael & Andrews	1,585	...	*615 445
Wisconsin Bridge Co.	1,583	879	*603 422
King Bridge Co.	1,748	866	... ...
La Fayette Bridge Co.	1,542	780	‡695 423
Joliet Bridge Co.	1,825	900	... ...
Massillon Bridge Co.	1,494	†743	675 †390
Bellefontaine Bridge Co.	1,730	815	742 390
Indianapolis Bridge Co.	1,549	760	784 466
Thatcher A. Parker	†1,442	749	651 379

*Claimed to have made a mistake of $100.
†Accepted.
‡Let for $640.

SIOUX FALLS, S. DAK.—It is reported that the county commissioners have authorized the construction of five bridges, 150, 140, 150, 60, 140 and 32 ft. long each. Cyrus Watts, County Engr.

CHARLES CITY, IA.—Bids are asked until April 4 for constructing and repairing pile and combination bridges for one year, according to reports. W. D. Lindaman, County Auditor.

IOWA CITY, IA.—Bids are asked until April 8 for constructing iron, steel and wood bridges, according to reports, surety $300. T. L. Crowley, County Auditor.

TOPEKA, KAN.—T. P. Rogers, County Comr., informs us that there are no bridges to be built by the county, as stated in our issue of March 17.

DILLON, MONT.—Reports state that a petition has been referred to the county surveyor for the construction of a bridge across Redrock Creek.

BUILDINGS.

BOSTON, MASS.—Bids are asked by the Boston Rapid Transit Commission, 20 Beacon St., until April 5, for building three stations for the subway, two in Scollay Square, and one in Adams Square. Arch., Charles W. Brigham, 27 Mount Vernon St.

HUDSON, N. Y.—Bids are asked until March 31 for improvements to that part of the City Building known as the opera house, including electric wiring, plumbing and gas fitting, etc. Wm. S. Hallenbeck, Cy. Clk.

FALL RIVER, MASS.—Bids are asked until April 6, according to reports, for the erection of a jail and house of correction. Edward Mott, Comr. of Bristol County.

NEW YORK, N. Y.—Plans have been filed by the Seaboard Realty Co., 320 Broadway, for two 6-story brick flat buildings on 7th Ave., from 112th to 113th St., to cost $300,000. Archs., Neville & Bagge, 217 West 125th St.; by the Seaboard Realty Co., for an 8-story brick factory on 20th St., near 4th Ave., to cost $200,000. Archs., Neville & Bagge; by S. W. B. Smith, 256 West 116th St., for two 5-story brick flat buildings, at 133d St. and 5th Ave., to cost $60,000. Archs., Neville & Bagge, 217 West 125th St.; by Joseph Milbank, 27 East 39th St., for three 2-story brick office and store buildings at 42d St. and Madison Ave., to cost $85,000. Archs., Lamb & Rich, 35 Nassau St.; by Emily L. Felt, 218 West 48th St., for four 5-story brick flat buildings on 115th St., near Park Ave., to cost $90,000. Archs., Neville & Bagge, 217 West 125th St.; by Polstein & Feinberg, 200 Henry St., for two 6-story brick flat and store buildings, at 242 and 246 Madison St., to cost $60,000. Arch., M. Bernstein, 145 Centre St.; by M. A. Brown, 128 West 93d St., for two 6-story brick and stone flat buildings on 91st St., near Central Park West, to cost $140,000. Arch., Henry Anderson, 1180 Broadway; by Mary E. Dempsey, for a 6-story brick flat building on West End Ave., near 102d St., to cost $50,000. Archs., Neville & Bagge; by Elizabeth Moore, 81 Morningside Ave., for two 6-story brick flat buildings, at 116th St. and Morningside Ave., to cost $150,000. Archs., Neville & Bagge, 217 West 125th St.

BAYONNE, N. J.—Bids are asked by the board of education, until April 5, for the construction of a school building for Public School No. 7, on 17th and Andrews Sts., between Aves. C. and D. Secy., R. T. Hewitt; Arch., Hugh Roberts, 76 Montgomery St., Jersey City, N. J.

CAMDEN, N. J.—It is reported that the Delaware & Atlantic Telegraph Co. has awarded a contract to Chas. McCaul, of Philadelphia, Pa., for the erection of a large building at the southeast corner of 5th and Market Sts. in this city.

ALTOONA, PA.—Plans are being prepared, according to reports, for a new stone church building for the Presbyterian Church of Altoona, to cost $50,000. Arch., William East, 232 5th Ave., Pittsburg, Pa.

PITTSBURG, PA.—Bids are asked until April 11 for painting and miscellaneous repairs to the U. S. Building in this city. Custodian, James S. Fruit.

WASHINGTON, D. C.—F. L. Carver, 1421 L St., Washington, is reported as having been awarded the contract for erecting a 11-story brick, steel and stone addition, 85 × 100 ft., to the Hotel Raleigh, to cost about $250,000.

BALTIMORE, MD.—The lowest bid received by the supervising architect, Washington, D. C., March 26, for the erection of a disinfecting house for the U. S. Marine Hospital, was that of Monon Bros., of Baltimore, at $1,537, and $175 for extras; time, 60 days. John Hughes, Jr., of Baltimore, bid $1,550, and $200 for extras; time, five weeks.

CLEMSON COLLEGE, S. C.—Bids are asked until April 20 for the construction of a brick building, 130 × 78 ft., for the textile department of Clemson College. P. H. E. Sloan, Secy. and Treas., Clemson College.

ATLANTA, GA.—Bruce & Morgan, Grant Bldg., are preparing plans for a new masonic temple building to be erected in this city.

NEW ORLEANS, LA.—We are informed that the following bids were received by the administrators of the Charity Hospital, March 19, for erecting the Richard Milliken Memorial Hospital for Children, on Tulane Ave. Secy., Edwin Marks; Archs., Sully, Burton & Stone Co., 1103 Hennen Bldg.:

Darcantal & Diassellis, New Orleans (accepted)	$78,949
Mills & Bradb, Atlanta, Ga.	81,000
Richardson & Berges, Washington, D. C.	81,377
Hoo, McNally, & Sw, Orleans.	81,923
Toledano & Reusch, New Orleans.	86,000
Jas. Stewart & Co., St. Louis, Mo.	86,467
Muir & Fromberg, New Orleans.	90,290
Thos. Carey & Son, New Orleans.	84,689
Campbell & Ledgerwood, Chicago, Ill.	91,508

LEXINGTON, KY.—We are informed that Geo. I. Hammond & Co., Canton, O., have been awarded the contract for the reconstruction of the court house in Lexington. Archs., Lehman & Schmitt, 619 Hickox Bldg., Cleveland, O.

CARTHAGE, O.—Bids are asked until April 5 for the brick, iron and stone work, etc., necessary for the proposed improvements on the south wing of Longview Hospital, Carthage. Pres., John Zumstein; Arch., Gustave W. Drach, 519 Main St., Cincinnatti, O.

YOUNGSTOWN, O.—Bids are asked by the board of education, until April 4, for constructing a 10-room brick and stone school building on Belmont Ave. Secy., W. N. Ashbaugh, 29 West Federal St.; Archs., Owsley & Boucherle, Wick Bank Bldg.

DETROIT, MICH.—Plans are being prepared for a brick and stone apartment building, for Edgar S. Dean, 79 Pingree Ave.; estimated to cost $30,000. Archs., Rogers & Macfarlane, Moffat Bldg.

CAIRO, ILL.—It is reported that the council has decided to issue $40,000 in 6% 20-year bonds for the erection of a city hall and jail building.

CHICAGO, ILL.—Bids are asked by the board of education, 1110 Schiller Bldg., until May 1, for the masonry, iron, plumbing work, etc., on the Fallon School addition, at 42d and Wallace Sts. Archs., N. S. Patton, 1117 Schiller Bldg. Building permits have been granted to General Henry Strong, for a 10-story brick store and loft building at 266 and 268 Franklin St., to cost $110,000; to Montgomery, Ward & Co., for a 12-story brick store and loft building at 117 to 120 Michigan Ave., to cost $225,000; to Rialto Co., for a 2-story brick addition at 137 to 155 Van Buren St., to cost $140,000.

CHICAGO, ILL.—Bids are asked until April 11 for changes to be made to the sub-basement of the City Hall. L. E. McGann, Comr. Pub. Wks.

RIVER FALLS, WIS.—Henry Ferger, 523 Park St., Milwaukee, Wis., has been awarded the contract for erecting the new normal school building at this place, at $33,100; Arch., William Waters, Oshkosh, Wis.

WAUKESHA, WIS.—A fire at this place, March 25, destroyed two buildings connected with the industrial school causing a reported loss on buildings, machinery and contents of $80,000; fully insured.

OLIVIA, MINN.—Bids are asked, until April 9, for the erection of an addition to the present school building of Independent School District No. 79. James B. Ferguson, Clk. of District; A. J. Hedlund, Arch., Olivia.

OMAHA, NEB.—The following bids have been received by the supervising architect, Washington, D. C., for building at U. S. Life Saving Service boat house on the Exposition grounds:

		Time.
Benj. F. King, Omaha	$2,185	50 days
Alexander & Son, Memphis, Tenn.	2,231	40 "
Wm. Goldie & Sons & Co., Omaha.	2,447	"
Geo. Moore & Sons, Nashville, Tenn.	1,987	40 "
Jno. Holland, Omaha.	2,600	55 "

CASTLEWOOD, S. DAK.—Bids are asked by the supervisor of Castlewood township, until April 19, for constructing a 2-story frame town hall, to cost about $2,300. Guttorm Fjerstad, Town Clk.

HELENA, MONT.—Plans and specifications for the new state capitol building, to be erected in this city, at a cost of about $275,000, will be prepared by Bell & Kent, of Helena, and Council Bluffs, Ia. The law requires that work shall be completed before 1900.

ST. LOUIS, MO.—Bids are asked by the board of education, 9th and Locust Sts., until April 5, for furnishing steam heat for the Board of Education Building, for a period of five years; also, until April 9, for the erection and completion of heating apparatus at various schools. Wm. B. Ittner, Comr. of School Bldgs.

ALVA, OKLA.—John Volk & Co., Rock Island, Ill., are said to have received the contract for erecting a brick normal school building, at $86,000. Work is to be completed by June 10, 1899. Secy., J. L. Mitch, Edmond, Okla.

SAN FRANCISCO, CAL.—It is reported that O. F. Von Rhein, Robert L. Coleman, Alfred Barrett and David Keil will erect buildings in this city at a total cost of $250,000.

LOGAN, UTAH.—Bids are asked, until April 16, for mason work, excavating, etc., required in erecting a school building in Cache county. Archs., C. T. Barrett, Logan. Address J. A. Kidman, Petersboro, Utah.

WATER-WORKS.

HALLOWELL, ME.—C. G. Wall, Water Comr., writes us that bids have not yet been asked for laying about 25,500 ft. of water pipe; the prices for furnishing it being noted under Contract Prices.

WEST LEBANON, N. H.—Frank Collier, Supt. Hartford Water Co., writes us that contracts have been awarded for water-works supplies to R. D. Wood & Co., 400

Chestnut St., Philadelphia, for furnishing the pipe; to M. J. Drummond & Co., 192 Broadway, New York, for specials, and to the Chapman Valve Mfg. Co., 72 Kilby St., Boston, for the gate hydrants. Consult. Engr., C. L. Goodhue, Burlington, Vt.

NORTHFIELD, VT.—We are informed that G. R. Andrews, Northfield, is preparing plans for works. If it is decided to build the plant he will want to purchase water motors and five or six carloads of pipe, etc. Population (1890), 1,222.

NATICK, MASS.—James McManus, Town Clk., writes us that nothing has yet been done in regard to extending the works, except to make tests; estimated cost, $6,000. Francis Bigelow is on the committee.

NEWTON, MASS.—This city has been authorized to issue bonds not exceeding $300,000 for water-works purposes.

SWAMPSCOTT, MASS.—Press reports state as follows: The citizens at an adjourned town meeting March 22 voted to empower the selectmen to purchase the plant of the Marblehead Water Co., and in the future supply the town with water for fire and family purposes, to go into effect on Sept. 1, at a cost not to exceed $94,000. The vote on the appropriation resulted in 113 for and 64 against. The question of purchasing the plant has been under consideration for several years. E. F. Small, Chn. Com., writes us that nothing will be done until after Sept. 1. Population, 3,800.

CATTARAUGUS, N. Y.—F. S. Oakes, Pres., writes us that exact source of the proposed new water supply has not been determined upon; it probably will not be for some months to come; estimated cost, $7,000.

CORNING, N. Y.—S. T. Hayt, Jr., Cy. Engr., writes us that at the recent municipal election an appropriation was voted for extending the mains across to the north side of the river. Bids will be asked as soon as plans and specifications are completed. The plant is leased by the town to Heermans & Lawrence.

PORT JEFFERSON (L. I.), N. Y.—It is stated that the justices of the peace and the commissioners of highways of Brookhaven town have granted a franchise to the Port Jefferson Water Co. to furnish water for this fire district and to enter into a five years' contract, some of the conditions of which are as follows: Thirty-three hydrants will be furnished for the fire district at a rental of $25 a year each, and two hydrants shall be furnished free. The company will also be required to furnish pipes for street sprinkling purposes, furnish water free to every public building; erect and furnish two drinking fountains for man and beast, and give a bond for $5,000. The company will not be allowed to open more than 1,000 ft. of street at any one time, and no excavation shall remain open more than five days. The plant is to be finished by Nov. 1. The stock is all taken, and when the plans are ready the company will advertise for bids. The reservoir will be located on the J. Biddle property at the head of Prospect St., and the water pumped by the Electric Light Co.'s plant. Des. Engrs. Foster & Foye, 11 Broadway, New York; Secy., Wm. T. Wheeler.

PITTSFORD, N. Y.—Bids are asked until April 27 for furnishing material and for constructing works, as described in our advertising columns. Des. Engr., Paul Voorhees, 1210 Guaranty Bldg., Buffalo; Pres. Comrs., P. D. Carpenter; Secy., Saml. Rand.

WYOMING, N. Y.—It is reported that Chicago parties are about to build a storage dam at this place, at a cost of $10,000.

CRANFORD, N. J.—The Cranford Electric Light & Water Co. has applied for a 99-year franchise for furnishing water and light. Capital stock, $30,000. E. Edgar Heston, Cranford; David M. Taylor, Oxford, Pa., are interested.

JERSEY CITY, N. J.—Press reports state that the East Jersey Water Co. will begin the construction of its proposed distributing reservoir at Great Notch and to improvements to the works at Little Falls in the summer.

PERTH AMBOY, N. J.—Bids are asked until April 4 for furnishing a 4,000,000 gallon pumping engine, also air pump foundations, etc., for the works at Runyon. The bids that were rejected were given in our issue of March 10. Geo. W. Eggert, Supt.

COPLAY, PA.—The Whitehall Water Co. will apply April 7 for a charter to supply this place, Hokendauqua, North and South Whitehall with water.

HELLERTOWN, PA.—Bids are asked until April 18 for furnishing the material and for constructing works, as described in our advertising columns. Engr., W. F. Cressman, Sellersville, Pa.; Secy., Russel Koplin.

READING, PA.—Emil L. Nuebling, Supt. Water Dept., writes us that the following bids were received March 23 for laying water mains and for furnishing sundry supplies:

Laying Pipes and Setting Gates and Gate Boxes and Fire Hydrants—Howard E. Ahrens & Bro., Reading, $2,707; Jacob S. Becker (accepted), $2,173.

Furnishing Cast-Iron Pipes and Specials—Reading Foundry Co., Ltd. (accepted), $6,074; McNeal Pipe & Foundry Co., Burlington, N. J., $6,820; Camden Iron Works, Philadelphia, $6,435.

Cast-Iron Gate Boxes—Weimer Machine Works Co., Lebanon, Pa., $720; Johnson Fdy. & Machine Co., Reading, $650; Reading Fdy. Co., Ltd. (accepted), $548.

Water Gates—Eddy Valve Co., Waterford, N. Y., $3,807; Ludlow Valve Mfg. Co., Troy, N. Y., $3,753; Rensselaer Mfg. Co., Troy, N. Y. (accepted), $3,545; Camden Iron Works, Philadelphia, $2,668.

Fire Hydrants—Camden Iron Works, Philadelphia, Pa. (Matthews), $1,455; (Matthews Imp.), $1,620; Ludlow Valve Mfg. Co., Troy N. Y., $1,920; Rensselaer Mfg. Co., Troy (accepted), $1,656; Norwood Eng. Co., Florence, Mass., $1,950; Reading Fdy. Co., Ltd. (No. 7), $1,680; (No. 6), $1,500; Eddy Valve Co., Waterford, N. Y., $1,980.

Corporation Cocks—Mueller Mfg. Co., Decatur, Ill. (accepted), $243; Fred. A. Smith, New York, N. Y., $264.

Pea Coal—Chas. H. Hunter, Reading, Pa. (accepted), $3,750; Percy Heilner & Son, Philadelphia, $3,750; J. H. Thamm, Reading, Pa., $3,750.

Oils and Grease—N. T. Kunkle & Son, Reading, Pa. (accepted), $151; Atlantic Refining Co., Reading, Pa., $136; Patton & Billman, Reading, Pa., $144.

Packing—Henry Connard, Reading, $116; Greth Machine Works, Reading (accepted), $98.

Hemp and Cotton Waste—Thos. Jackson & Son, Reading (accepted), $51.

Water Meters—Hersey Mfg. Co., Boston, Mass., $3,180; Union Water Meter Co., Worcester, Mass., $2,890; Neptune Meter Co., New York, N. Y., $2,395; National Meter Co., New York, N. Y. (accepted), $3,498.

OAKLAND, MD.—Councilman E. M. Spadden writes us that the council in favor of works and a light plant will qualify about April 1. It will probably be May 7 before the question of building the improvements is taken up. Population, 1,500.

POCOMOKE CITY, MD.—The legislature has authorized this place to vote on the question of issuing bonds for works. E. W. Veasey, Clk.

TAKOMA PARK, D. C.—This place has been authorized to issue $40,000 in bonds for works, a sewerage system and a light plant. Geo. A. Warren may be addressed.

WILLIAMSPORT, MD.—M. E. Cullen, Town Treas., writes us that it may be some time before a definite plan has been decided upon in regard to the proposed works and light plant, for which this place voted March 7 to issue $20,000 in bonds. The town will be furnished with light first. L. R. Spangler is on the committee.

CHARLOTTESVILLE, VA.—This place is reported to have voted March 17 in favor of issuing $12,000 in bonds for extending the works. A 1,000,000 gallon pump will be put in at once.

HUNTINGTON, W. VA.—It is stated that the American Water-Works & Guarantee Co., Pittsburg, Pa., will install a filter plant of 2,000,000 gallons capacity at its works at this place. Supt., A. W. Adams.

WHEELING, W. VA.—It will be about 30 days before bids will be asked for furnishing a 12,000,000-gallon pump to cost about $75,000. Pres. Water Bd., H. F. Jones; Secy., John Schellhase.

REIDSVILLE, N. C.—A. J. Ellington writes us that the city has engaged Prof. Henry E. Knox, Jr., Charlotte, N. C., to prepare estimates, etc., for the proposed works. After surveys have been completed bids will probably be asked for constructing the works. Mayor, R. T. Williams; Chn. Com., J. B. Johnson.

GREENWOOD, S. C.—Watson & Wagnall, Rome, Ga., are reported to have been awarded the contract for constructing the works, as advertised in Engineering News, at $25,958, and the stand-pipe at $3,089. Consult. Engr., Nisbet Wingfield, Augusta, Ga.; Chn. Com., B. M. Hays.

BUENA VISTA, GA.—J. H. Lour, Mayor, writes us that the city has made no permanent arrangement yet in regard to a water supply, noted in our issue of last week.

MONTGOMERY, ALA.—The council on March 23 perfected the purchase of the works of the Capital City Water Co. for $420,000. W. B. Rice, of Boston, was the majority stockholder in the company. The price agreed on will be paid in 4½% water-works bonds. The purchase contemplates Mr. Rice completing $20,000 worth of improvements he has commenced. Mayor, John H. Clisby.

COLUMBUS, MISS.—This place voted March 23 to issue $70,000 in bonds for improving the works and for building a sewerage system. H. M. Lanier, Mayor.

McCOMB, MISS.—This place will probably vote April 18 on the question of works and a light plant to cost about $60,000. Engrs., Sanders & Porter, Louisville, Ky.; Mayor, C. C. Jarvis.

SUMMIT, MISS.—This place will at once sell the bonds voted for on March 21 for the proposed works. After the bonds are sold bids for the works will be asked. Engrs., Alber & Byrne, Birmingham, Ala.; Mayor, J. B. Holden.

MARTIN, TENN.—C. A. Cashon, Recdr., writes us that contracts for furnishing machinery, etc., for the proposed works and light plant have been let with the exception of the engine; estimated cost, $25,000. Engr., E. E. Davis, Paris, Tenn.

BARNESVILLE, O.—This place will vote April 4 on the question of granting a franchise for works to J. H. McCrady, of Braddock, Pa., and Jos. Hastings, of Allegheny, Pa. Population, 4,000. H. E. Dement, Clk.

CINCINNATI, O.—Bids are asked until April 28 for constructing an intake pier, water tunnel, etc., as stated in our advertising columns; estimated cost, about $500,000. Aug. Hermann, Pres. Bd. Administration; C. G. Roth, Clk.——E. F. Layman, 32 East Third St., Cincinnati, has been engaged to prepare plans, etc., for works for College Hill.

MILO, O.—John Shotwell, Andrew Koehl and J. Benson has been appointed a committee to confer with the Columbus Central St. Ry. Co. to extend a water main to this place.

NORWOOD, O.—J. A. Brockhoff, Clk. Water-Works, writes us that the following bids were received March 24 for laying 8,075 ft. of 4 to 12 in. water pipe in yellow clay, average depth, 3½ ft.:

John Snyder, Norwood	$1,690
Burns & Air, 632 June St., Cincinnati, O.	1,554
Carothers & Crane, 326 W. Pearl St., Cincinnati, O.	2,143

MINERAL POINT, O.—Paul Voorhees, 1210 Guaranty Bldg., Buffalo, N. Y., has been engaged to prepare plans and specifications and to superintend the construction of works and a light plant; estimated cost of works, $12,000.

POMEROY, O.—The Pomeroy & Middleport Water Co. has been granted a 20-year franchise by the council. Thos. A. Dun and Geo. McDonald, Scranton, Pa., are interested.

SANDUSKY, O.—Local papers state that new bids will be asked for furnishing about 4,300 ft. of 8-in. water pipe, the itemized bids for which were given in our issue of last week. F. W. Bauer, Supt.

TOLEDO, O.—Bids are asked until April 4 for furnishing 15 tons of pure and soft pig lead. T. R. Cook, Supt. Water-Works.

YOUNGSTOWN, O.—It is reported that the mains will be extended to Lansingville on the recommendation of Wm. S. Hamilton, Supt.

JEFFERSONVILLE, IND.—Bids are asked until April 21 for furnishing and constructing a stand-pipe, as described in our advertising columns. Supt., D. M. Allen, Jeffersonville Water Supply Co.

CHICAGO, ILL.—Bids are asked until April 11 for furnishing 13,000 ¾-in. ferrules, 5,000 ⅝-in. ferrules; check, $500. L. E. McGann, Comr. Pub. Wks.

EDWARDSVILLE, ILL.—Charles Boeschenstein, Editor "Intelligence," and Treasurer Edwardsville Water Co., writes us that bids will be asked as soon as possible for constructing the proposed works for the Edwardsville Water Co. Plans and specifications can be seen at the office of the engineer, J. A. Holmboe, 9th and Jefferson S's., Louisville, Ky., or of the company after April 5. The works will have 1,450 tons of pipe, 85 hydrants, two 1,000,000-gallon pumps, two 100 HP. boilers, stand-pipe, telephone line, etc.; estimated cost, $70,000. Population, 5,000.

PLAINFIELD, ILL.—Wm. G. Stopp, Clk., writes us that the village is about to engage an engineer to prepare plans, etc., for the proposed works, to cost about $5,500. The contract for drilling a well was awarded March 28. Population, 1,000.

UTICA, ILL.—We are informed that John L. White, Leonore, Ill., has been granted a 20-year franchise for works and a light plant, as advertised in Engineering News. S. W. Reynolds, Chn. Com.

FORT ATKINSON, WIS.—An election will be held April 5 to vote on the question of building works.

MILWAUKEE, WIS.—Bids are asked until April 2 for laying water mains in certain streets during the year, and until April 4 for furnishing 1,000 tons of cast-iron water pipe, with the privilege of increasing to 1,500 tons. The pipe to be of the following quantities and sizes: [illegible] tons of 12-in., 100 tons of 8-in., 750 tons of 6-in., [illegible] of 4-in., and 15 tons of 3-in. water pipe, and the addi[illegible] 100 tons if ordered, to be 3, 4, 6, 8 and 12-in., the amo[illegible] of each to be determined later. G. H. Benzenberg, Ch[illegible] Mains, Pub. Wks. and City Engr.

WHITEWATER, WIS.—The council is reported to have voted to purchase the works of the Whit[illegible] Water-Works Co., the franchise expiring Nov. 16.

MINDEN, IA.—An election will be held Apr[illegible] 11 to vote on the question of issuing $5,000 in bonds [illegible] works, according to reports.

NEW VIENNA, IA.—The question of building works will be voted upon at the election to be held this month. Jacob Kerper may be addressed.

BARNESVILLE, MINN.—Chas. S. Mardon, attorney, writes us that it will be at least 90 days before anything can be done in regard to the proposed works. Engr., Chas. F. Loweth, St. Paul.

MORTON, MINN.—The question of building works is being considered, according to reports.

TRIPP, S. DAK.—Bids are asked until April [illegible] for constructing works and for the purchase of $5[illegible] of bonds for the works. We are informed that the supply will be secured from a spring; population, 320. John McClain may be addressed.

OMAHA, NEB.—We are informed that proposals for improvements to the works of the Omaha Water Co. are in progress; estimated cost, $300,000. The E. P. Allis Co., Milwaukee, Wis., has the contract for furnishing a 20,000,000-gallon pumping engine. Contracts have also been made for furnishing 7,000 tons of pipe, with valves, etc. Ch. Engr., Geo. T. Prince.

KANSAS CITY, MO.—The question of putting in a water filter, at a cost of about $125,000, is being considered.

PLATTSBURG, MO.—E. C. Hall, Mayor, writes us that nothing has yet been done in regard to the proposed works.

WEBSTER GROVES, MO.—This place voted March 22 to issue $5,000 of 20-year 6% bonds for works, the water supply to be secured from the St. Louis mains.

BATESVILLE, ARK.—Bids will probably soon be asked for building works, to cost about $25,000. C. R. Handford, Wm. Ramsey and Robt. Neill are on the committee.

STUTTGART, ARK.—We are informed that Chas. Williamson, Pres. and Gen. Mgr. Stuttgart Water & Electric Light Co., has been granted a 30-year exclusive franchise for furnishing water and light. The works will be built first. Specifications have not yet been completed. The material will be purchased and the work done by Mr. Williamson. Capital stock, $10,000.

SWEETWATER, TEX.—It is stated that the works at Colorado, Tex., owned by D. S. Parks, will be moved to this place at once.

CHEHALIS, WASH.—Press reports state that the Chehalis Water Co. has passed into the hands of E. S. Hamlin and Ed. Foster, of Olympia, Wash., Mr. Hamlin having recently purchased the interest of John Corkish, of Portland, Ore. The company recently sold $20,000 worth of its bonds to Morris & Whitehead, of Portland, for $18,000.

HOQUIAM, WASH.—Harry C. Heermans, Corning, N. Y., is reported to have been granted a franchise for new works. Population (1890), 1,302.

CLOVERDALE, CAL.—T. B. Wilson, Clk., writes us that after the election of April 11 this place will probably take steps to issue bonds for municipal works and light plant. Population (1890), 763.

GRASS VALLEY, CAL.—Bids were received March 16 for constructing complete works as follows: C. D. Vincent, $32,616; Martin, Muir & O'Neill, $32,692; Williams-Bauer Co., $35,020; James Stanley, San Francisco, $35,87[illegible].

MONROVIA, CAL.—A water tunnel 2,200 ft. long will be driven at once for furnishing this place with water, under a new contract made with S. M. Sevier, according to reports. Bond, $25,000.

PRESCOTT, ARIZ.—Wm. O. O'Neill, Mayor, writes us that bids will probably be opened May 18 for constructing extension to works, to cost about $115,000, and for constructing a sewerage system, to cost $25,000. The new supply will be secured from a reservoir on Pott's Creek. Des. Engr., J. J. Fisher, Prescott; Consult. Engrs., Col. Jas. D. Schuyler, Los Angeles, Cal., and R. B. Burns, Williams, Ariz.

AMPRIOR, ONT.—It is reported that plans for works will be prepared.

SEWERAGE.

KITTERY, ME.—The New England Sewage Disposal Co. is reported to have been incorporated with a capital stock of $100,000; Pres., Chas. N. Farnham, Hartford, Conn.; Treas., Garvey T. D. Mitchell, Chelsea, Mass.

WINOOSKI, VT.—This place will decide the question of building a system at the town meeting to be held April 13, according to reports; estimated cost, $30,000. Engr., V. K. Nash.

BEVERLY, MASS.—It is proposed to construct a main sewer in Cabot St., and lateral sewers in a number of other streets this year.

METHUEN, MASS.—This place will probably apply for permission to use the Lawrence system before considering the question of building an independent system.

WORCESTER, MASS.—Bids are asked until April 5 for furnishing the following material: Sand, 2,000 yds.; Portland cement, 5,000 bbls.; Rosendale cement, 7,000 bbls.; manhole castings, 300; catch-basin castings, 100; brick, 2,500,000; lime, 3,500 tons; catch-basin stone, 100 sets; teaming; vitrified pipe, three miles; cement pipe, two miles. Harrison P. Eddy, Supt. Sewers.

WATERBURY, CONN.—Bids are asked until April 1 for constructing about 8,000 ft. of 15 to 8-in. pipe sewers, 48 manholes, etc. R. A. Cairns, Cy. Engr.

ALBANY, N. Y.—Bids are asked until April 4 for constructing 15-in. pipe sewers in McCarthy Ave.; two sureties of $3,500 each. D. J. Lanahan, Clk.

HUDSON, N. Y.—The superintendent of public works has been directed to prepare plans, etc., for the proposed brick sewer in State St., to cost about $9,000. Recdr., E. D. Smith.

ONEIDA, N. Y.—Bids are asked until April 6 for constructing 6,600 ft. of pipe sewers, as stated in our advertising columns. Engrs., Stanwix Engineering Co., Rome, N. Y.; J. T. Wallace, Pres. Bd. Sewer Comrs.

TROY, N. Y.—Bids are asked until April 8 for constructing 12-in. pipe sewers in Hawthorne St. E. Ogden Ross, Secy. Contracting Bd.

BAYONNE, N. J.—It is proposed to construct a circular steel pipe sewer across the lands of the Central R. R. of N. J. and a brick sewer to tide water. W. C. Hamilton, Cy. Clk.

HAVERFORD, PA.—Press reports state as follows: Supervisors A. J. Cassatt and Chas. A. Frederick on March 26 granted the Devon & Cobb's Creek Sanitary Drainage Co. the right to lay sewers in any and all roads of the township, providing the company would increase its bond from $3,000 to $5,000 and maintain an office in the township.

BALTIMORE, MD.—An ordinance hase been passed for the construction of a 10-ft. brick sewer in the beds of Brice alley, Mosher St. and Bayson St.; estimated cost, $48,000.

SPARTANBURG, S. C.—Bids are asked until April 16 for the purchase of $50,000 of 6% 30-year sewer bonds. A. B. Calvert, Mayor.

COLUMBUS, MISS.—This place has voted to issue $70,000 in bonds for a system and water-works.

BELLEFONTAINE, O.—Alfred Butler, Secy. Comm., writes us that the city will vote in April on the question of building a system.

CLEVELAND, O.—Bids are asked until April 21 for constructing a main sewer; check, $3,000; and until April 22 for constructing a main sewer; check, $6,000. Geo. R. Warden, Dir. Pub. Wks.

EAST CLEVELAND, O.—E. D. Burton, Mayor, writes us that contracts will not be let before May 15 for sewers. Dr. Spencer and S. F. Adams are on the committee.

MADISON, WIS.—The Sanitary Engineering Co., Detroit, Mich., will construct a sewage purification plant in this city at a cost of $37,000. City Engineer Dodge may be addressed.

MARSHFIELD, WIS.—It is stated that an election will be held next month to vote on the question of issuing bonds for improving the system.

HIGGINSON, ARK.—W. H. Hipolite, Ch. Engr. Williamsville, Greenville & St. Louis Ry. Co., Poplar Bluff, Mo., wants an engineer to make plans and surveys for a system; probably for this place.

SALINAS, CAL.—The Spreckles Sugar Co. is reported as considering bids for building about 17,000 ft. of 24-in. pipe sewers at its factory and town site property. Supt., W. C. Waters.

PRESCOTT, ARIZ.—Bids are asked until about May 18 for constructing a system to cost about $30,000, and water-works to cost about $110,000. Wm. O. O'Neill, Mayor.

LONDON, ONT.—Willis Chipman, Toronto, and A. O. Graydon, Cy. Engr., are reported to have been asked to submit a report on the most feasible method of dealing with the sewage after it enters the river.

MOUNT PLEASANT, B. C.—The council of this place is reported as considering the question of building a system to cost about $200,000. A temporary system to empty into False Creek will cost about $15,000.

GARBAGE DISPOSAL—STREET CLEANING

CHICOPEE, MASS.—Bids are asked until April 10 for removing garbage from residences, etc., for a term of one year. Geo. W. D. Lyon, Chn. Bd. Health.

BUFFALO, N. Y.—Grattan & Jennings, Buffalo, will probably be awarded the contract for destroying the garbage for a term of five years at $79,200 for the entire period. They will use the Cummer-Metzger system. A. G. Parsons, Secy. Dept. Pub. Wks.

TRENTON, N. J.—Bids are asked until April 5 for collecting and removing ashes and for destroying, etc., the garbage for two years from May 1. C. E. Murray, Cy. Clk.

INDIANAPOLIS, IND.—Bids are asked until April 6 for sprinkling certain streets, avenues and alleys for the season of 1898. M. A. Downing, Chn. Bd. Pub. Wks.

WINNIPEG, MAN.—The question of building a garbage disposal plant to cost about $9,000 is being considered.

STREETS AND ROADS.

REVERE, MASS.—The Metropolitan Park Commissioners have awarded a contract to P. H. Byron, Medford, at $4,570, to grade a portion of the Revere Beach Park Reservation.

BOSTON, MASS.—Bids are asked by the Boston transit commission, 20 Beacon St., until April 5, for paving and painting the Charlestown bridge; surety, $1,000. B. Leighton Beal, Secy.

WESTPORT, MASS.—Bids are asked by the Massachusetts State Highway Commission, 4 Mount Vernon St., Boston, until March 31, for constructing a section of state highway, 6,300 ft. long; surety, $250.

GLOUCESTER, MASS.—A petition is before the highway committee for macadamizing Bass Ave., according to reports. Frank E. Davis, Mayor, informs us that an "Invincible" stone crusher has been ordered.

METHUEN, MASS.—The selectmen have authorized an appropriation of $7,000 for macadamizing. C. D. Holman may give information.

PLAINVILLE, CONN.—The council has voted to spend $1,000 to macadamize a portion of West Main St.

ARDSLEY, N. Y.—Reports state that this place is to vote April 4 on the question of issuing $25,000 in street improvement bonds.

MILTON, MASS.—Bids are asked by the street committee until April 30 for grading and surfacing about six miles of roads, as stated in our advertising columns. W. F. Bates, Engr.

BUFFALO, N. Y.—Bids are asked until April 5 for paving portions of Dock St., Lock St., Niagara St. and West Perry St. R. G. Parsons, Secy. Bd. Pub. Wks.—The following bids were received March 24 for resurfacing and repaving Pearl St., from Terrace to Tupper St.: Barber Asphalt Co., repaving, $32,736; resurfacing, $23,307; American Contracting Co., repaving, $41,896.14; resurfacing, $23,500; Utica Paving Co., resurfacing, $23,500; Columbia Construction Co., resurfacing, $27,384; German Rock Asphalt & Cement Co., resurfacing, $24,393; P. B. McNaughton, repaving, sandstone, $47,200; brick, $42,290.

ONEIDA, N. Y.—The question of paving a part of Madison St. and Phelps St., to cost about $2,000, will be submitted at the next election.

MOUNT MORRIS, N. Y.—The commissioners propose to lay out a new highway in this town. Highway Commissioner Carbrey has been instructed to repair highways, according to reports.

BRIGHTON, N. Y.—J. T. Caley, Howard A. Smith and W. L. Manning, County Supervisors, composing the street committee, have recommended the proposed paving on East Ave., from Culver St. to the village line; estimated cost, $10,000.

PITTSFORD, N. Y.—It is reported that the road from Brighton to Pittsford will be improved.

SYRACUSE, N. Y.—The following bids were received by the council March 21 for paving in portions of certain streets: South Salina St. with asphalt, Columbia Construction Co., $44,943; Warren-Scharf Asphalt Paving Co., $46,598; Empire Construction Co., $48,156. Merriman Ave., with asphaltina, Asphaltina Construction Co., $4,456. Irving Ave., asphalt, Warren-Scharf Asphalt Paving Co., $4,962; Columbia Construction Co., $5,286; C. T. Hookway, New York Brick & Paving Co., brick, $4,203; A. S. Webb, New York Brick & Paving Co., brick, $4,246; Asphaltina Construction Co., asphaltina, $5,107; Empire Construction Co., asphalt, $5,184. M. Z. Haven, Cy. Clk.

UTICA, N. Y.—A hearing will be given April 1 on the proposed extension and laying out of Third Ave. and Emily St. J. A. Cantwell, Cy. Clk.

JERSEY CITY, N. J.—Bids are asked until April 4 for improving four streets at the following estimates: About 6,167 cu. yds. of excavation, 2,196 sq. yds. of Belgian block paving, 2,403 lin. ft. of curbing, 2,900 cu. yds. of filling, 4,500 cu. yds. of rock excavation, and 31,384 sq. ft. of flagging, and also for building about 1,100 ft. of pipe sewers. Wm. A. Tolson, Clk. pro tem.—Bids are asked until April 7 for improving the sidewalks of the Branch Road connecting the Hudson Boulevard with Weehawken. Edward W. Woolley, Clk. Bd. Freeholders, Fuller Bldg.

NEW BRUNSWICK, N. J.—The board of freeholders have been petitioned to macadamize the road from here to Cranberry, a distance of five miles.

MORRISTOWN, N. J.—Reports state that the board of freeholders have let contracts for constructing a macadam road five miles long from Morristown to Basking Ridge; estimated cost, $3,500 a mile.

NEWARK, N. J.—Bids are asked until March 31 for paving Badger Ave with 11,500 sq. yds. of granite block, 2,000 sq. yds. of Belgian block, curbing, etc. J. C. Mundy, Supt. Pub. Wks.

PASSAIC, N. J.—Bids are asked by the county freeholders until April 4 for macadamizing, grading, etc., a portion of Lafayette Ave. and Fifth Ave.; surety, $1,000. Wm. L. Whitmore, Clk.—Bids are asked by the council until April 19 for furnishing six car loads of blue flag stone, 1,500 ft. of curb and gutter, 1,500 lin. ft. of sidewalk flagging and repairing bluestone walks, etc.

TRENTON, N. J.—Bids are asked by the board of freeholders until April 12 for macadamizing the White Horse Road a distance of about 2½ miles; surety, $1,000.

CONSHOCKEN, PA.—Reports state that a contract has been awarded to Edward E. Hart at $8,942 for grading and macadamizing Fayette St. and Eighth and Ninth Aves.

BETHEL, PA.—Press reports state that Supervisors Miller and Brechbill are considering the purchase of a stone crusher.

MEADVILLE, PA.—Bids are asked until April 4 for constructing brick, stone, cement or plank sidewalks. Willis R. Vance, Cy. Clk.

READING, PA.—Bids are asked for the purchase of about $100,000 in paving bonds, according to reports.

PITTSBURG, PA.—Bids are asked by the department of public works until April 4 for paving, grading, curbing and laying sidewalks in portions of three streets, and paving, etc., in eight streets. Edward M. Bigelow, Dir.—Bids are asked until April 14 for improving the White ak Level Road and the River Road; sureties, $40,000 and $30,000 respectively. W. E. Thompson, County Controller; F. W. Patterson, Engr.

RANKIN, PA.—Bids are asked until April 5 for paving in Kenmawr Ave. with brick and stone; surety, $200. Trimble & Miller, Borough Engrs., 430 Fourth Ave., Pittsburg.

SUNBURY, PA.—P. H. Moore, Burgess, informs us that the council proposes to pave 1,000 sq. yds. of street with brick; no ordinance has yet been passed.

NEW ORLEANS, LA.—Bids are asked until April 4 for paving brick sidewalks in portions of 11 streets. P. Alph Robouin, Comptroller.

SANDUSKY, O.—Bids are asked until April 27 for paving Wayne St. with brick, from Water to Market St., and with asphalt from Market to Scott St. A. W. Miller, Cy. Clk.

INDIANAPOLIS, IND.—Bids are asked by the department of public works until April 1 for paving Washington St. with asphalt, from Alabama St. to Senate Ave.

INDIANAPOLIS, IND.—Bids are asked by the board of public works until April 6 for grading, graveling, etc., portions of five streets, and grading and paving with creosoted wooden blocks in four streets. M. A. Downing, Chn.

SAGINAW, MICH.—Bids are asked until April 1 for paving 5,900 sq. yds. with brick on concrete foundation in Germania Ave. H. E. Terry, Cy. Engr.

MASON CITY, IA.—Bids are asked until April 2 for 9,000 sq. yds. of brick paving and 3,000 lin. ft. of cement curbing. I. E. Stanley, Cy. Engr.; W. P. Fitch, Cy. Clk.

ST. PAUL, MINN.—Bids are asked until April 5 for making repairs for 1898; surety, $600. Matt Jensen, Cy. Clk.—C. H. Bronson, Clk. Bd. Pub. Wks., informs us that the proposed paving in Summit Ave. with asphalt or brick has been laid over until May.

CHEYENNE, WYO.—A military road will be constructed at a cost of $10,000, from Fort Washakie to Yellowstone Park. Lieut. McBlair, Ninth Cavalry, Fort Washakie, is in charge of the work.

BERKELEY, CAL.—D. Lambert has been awarded a contract for constructing about 35,386 sq. yds. of macadam road and 1,200 lin. ft. of pipe culvert.

SAN FRANCISCO, CAL.—The following bids were received by the county supervisors for stone paving in Market St., from Second to Fifth St.: City Street Improvement Co., $20,000; Pacific Paving Co., $23,750; San Francisco Paving Co., $25,850; Fred J. French, $25,857; Alcatraz Co., $26,241.

ST. JOHN, N. B.—The street and sewer department has estimated the amount of work for the season at $27,900.

MANUFACTURING PLANTS.

HOLYOKE, MASS.—Bids are asked until April 6, according to official information, for the erection of factory buildings for the National Blank Book Co. and the Smith & White Mfg. Co., manufacturers of blank books and pads and papatries. The building for the former company will be a 3-story brick structure, with 108,000 sq. ft. of gravel roofing, and will cost $60,000; the building for the latter will have 60,000 sq. ft. of gravel roofing, and is expected to cost $30,000. Bids will also be received about May 1 for 500 electric lights and 35 and 50-HP. engines, estimated to cost $6,000. Samuel M. Green, Consulting Engr., Holyoke.

SCHENECTADY, N. Y.—G. E. Emmons, Mgr. General Electric Co., informs us that the Hilton Bridge Construction Co., Albany, N. Y., was awarded the contract, March 25, for the steel construction work for the company's new iron foundry, and that Andrew Kinum, of Schenectady, received the contract for the masonry and carpenter work. The building was designed by the company's engineers. It will be of steel frame construction, with brick filling, 140 × 500 ft., with an annex 100 × 120 ft., to be used as a cleaning room. The fan method of heating will be used. Contracts for equipment will not be let at present.

MUNCIE, IND.—A fire in this city, March 27, destroyed the fruit jar glass factory of Bell Bros., causing a reported loss of $60,000; insurance, $22,000. It is said that the structure will be rebuilt at once.

DETROIT, MICH.—The Commercial Milling Co., of Detroit, informs us that it will erect a wooden elevator, with a capacity of 40,000 bushels, for the storage of grain. A 50 to 60-HP. gas engine will have to be bought. Plans have not yet been decided upon, nor architect chosen.

DES MOINES, IA.—Nelson & Van Oel are said to have received the general contract for building the new Cownie factory, at $9,489. Wallace & McNamara have the contract for heating and plumbing, at $1,298. Archs., Foster, Liebbe & Co., 8th and Walnut Sts.

OELWEIN, IA.—The following bids have been received for the erection and completion of the shops of the Chicago, Great Western Ry., including ten buildings, with complete water system, electric light, etc. Archs., Reed & Stern, St. Paul, Minn.:

*Hoff Bros., 230 Lumber Exchange, Minneapolis	$146,780
Moulton & Starrett, Chicago, Ill.	149,908
Grace & Hyde, Chicago, Ill.	150,000
Lauer Bros., St. Paul, Minn.	156,196
J. W. Thomson, St. Louis, Mo.	159,950
J. L. Record, Minneapolis.	160,900
Edwards & Walsh, Davenport, Ia.	161,495
William Porten, St. Paul	162,000
Geo. J. Grant, St. Paul.	162,227
Butler-Ryan Co., St. Paul.	163,262
Hennesy & Cox, St. Paul.	164,084
Swift & Co., Chicago, Ill.	166,000
Barnett Record Co., Minneapolis.	166,500
Thomas Brady, St. Paul.	168,598
McArthur Bros., Chicago.	172,900

*Awarded contract.

LAWRENCE, KAN.—The electrical engineering shops and engine house of the Kansas State University were destroyed March 22, causing a reported loss of $16,000 to the building and of about $20,000 on the machinery, including six large boilers, two engines of 150 and 35 HP., and several large dynamos. Prof. Blake may be addressed.

TACOMA, WASH.—The Pacific Mill, said to be the largest shingle mill in the world, and operated by Metcalf & Wade, was destroyed by fire March 23, causing a loss of about $100,000.

AMHERST, N. S.—The car works of Rhodes, Curry & Co. were burned March 22, causing a reported damage of about $40,000. The molding shop and the mill were the buildings destroyed.

MISCELLANEOUS CONTRACTS.

BUOY SERVICE.—Detroit, Mich.—Bids are asked until April 18 for maintaining buoys for one year from July 1. Duncan Kennedy, U. S. Lighthouse Inspector, Detroit.

TELEGRAPH FRANCHISE.—Elwood, Ind.—J. B. Price, of the Postal Telegraph Co., New York, has applied for a franchise to extend the system through Madison county.

TELEPHONE SYSTEM.—Moultrie, Ga.—Reports state that J. F. Monk, W. H. Barber and others will incorporate a company to operate a telephone system under a franchise.

TELEPHONE SYSTEM.—Marshall, Mo.—Reports state that the Standard Telephone Co. has been awarded a contract to construct a telephone line from Marshall to Kansas City.

STONE JETTY.—Cleveland, O.—Bids are asked by the board of park commissioners, 76 Euclid Ave., until April 6 for constructing a stone jetty at Edgewater Park; surety, $5,000. C. W. Pratt, Jr., Ch. Engr.

TELEPHONE SYSTEM.—Willow, Cal.—Bids are asked by the county supervisors until April 14 for the purchase of a franchise to construct and operate a telephone system between Willow and Elk Creek.

LEVEE WORK.—Memphis, Tenn.—Bids are asked by the St. Francis levee district until May 10 for constructing about 30 miles of levee to Bridge Junction; estimated cost, $200,000. Harry N. Pharr, Ch. Engr.

DOCKS AND SLIPS.—Mobile, Ala.—Reports state that the Mobile & Ohio R. R. Co. will construct docks and slips along a 1,000-ft. frontage, recently purchased on the Mobile River. J. G. Mann, Gen. Mgr., Mobile.

METAL WORK.—Oswego, N. Y.—Maj. W. S. Stanton, U. S. Engr., Oswego, informs us that the Biggs Boiler Co., Akron, O., submitted the lowest bid, March 25, at $235, for the metal work in the construction of oil houses.

REPAIRING FLOATING BATHS.—New York, N. Y.—Bids are asked until April 5 for repairing pontoons and for constructing bridges, etc., for the public floating baths. Henry S. Kearny, Comr. Pub. Buildings, 346 Broadway.

MAINTAINING BUOYS.—Tompkinsville (S. I.), N. Y.—Bids are asked by Wm. M. Folger, U. S. Navy Lighthouse Inspector, Tompkinsville, until April 12, for maintaining buoys in harbors, rivers, lakes, etc., for one year from July 1.

RIPRAP.—Philadelphia, Pa.—Bids are asked by the superintendent of the Philadelphia Co., 820 Penn Ave., until March 31, for furnishing and delivering about 6,000 cu. yds. of riprap at the breakwater on Brunot's Island, Ohio River.

CANAL WORK.—Joliet, Ill.—Reports state that a contract has been awarded to Heidmaier & Neu, Chicago, for constructing a crib 6,000 ft. long parallel with the Des Plaines River for the state canal at Joliet, to cost $40,000.

CANAL WORK.—Boston, Mass.—Bids are asked by the Electrolytic Marine Salts Co., 53 State St., Boston, until April 22 for enlarging a section of canal and constructing a timber lining, as stated in our advertising columns. Geo. A. Merrill, Engr.

CRIB WORK.—New York, N. Y.—Bids are asked by the department of docks, Pier A, North River, until April 8 for constructing a crib bulkhead between West 125th St. and West 137th St., North River; to contain about 415,558 cu. ft. of cribwork, etc.

TELEPHONE LINE.—Missoula, Mont.—It is reported that contracts have been let by the Rocky Mountain Bell Telephone Co., Salt Lake City, Utah, for 4,000 telephone poles and the necessary wire for constructing a system from Missoula, Mont., to Mullan, Idaho.

TELEPHONE SYSTEM.—Media, Pa.—The council has granted a right to the Delaware County Telephone Co. to construct a system throughout the borough. The company has about completed connections between this place and Chester, according to reports.

TELEPHONE SYSTEM.—Corunna, Mich.—An ordinance has been presented to the council to grant a franchise to the New State Telephone Co., which proposes to construct

a telephone system and exchange. The following have been appointed a committee: A. W. Green, E. Eveleth and Mayor Marshal.

DREDGING.—New York, N. Y.—Bids are asked by the department of docks, Pier A, Battery Place, until April 8 for dredging in the North River between the Battery and West 34th St.; also for about 277,700 cu. yds. of dredging in different parts of the North River.

PARK WORK.—New York, N. Y.—Bids are asked by the department of parks, Arsenal Building, Central Park, until April 7 for improving the East River Park by laying 4,600 sq. ft. of asphalt walks, 480 lin. ft. of bluestone edging, etc.; also for 8,400 sq. ft. of asphalt walk, and 325 lin. ft. of curbing, in East End Ave.

SUBWAY PLATFORM.—Boston, Mass.—Bids are asked by the Boston Transit Commission, 20 Beacon St., until April 5, for constructing a platform at the Scollay Square Subway station, to include about 3,200 cu. yds. of excavation, 170 tons of iron and steel, 920 cu. yds. of concrete, brick and stone masonry, etc.

FIRE APPARATUS.—New York, N. Y.—Bids are asked by the fire department, 157 East 67th St., until April 6, for furnishing two fourth-size steam fire engines with La France pumps and two fourth-size steam fire engines with American type pumps; also four second-size and eight third-size hose wagons. John J. Scannell, Comr.

NAVY SUPPLIES.—Washington, D. C.—Bids are asked until April 12 for furnishing the Portsmouth Yard with copper, brass, zinc, lead, hardware, etc., and until April 26 for furnishing the navy yard at Mare Island, Cal., with a quantity of bolts, lumber, copper, iron, brass, pipe, tubing, etc. Edwin Stewart, Paymaster Gen. U. S. Navy, Washington.

TELEPHONE SYSTEM.—Mansfield, O.—An ordinance will be prepared and submitted to the council for the proposed organization of the Mansfield Telephone Co. to erect a circuit throughout the state, in opposition to the Union Telephone Co. A committee, consisting of W. M. Hahn, J. W. Sharp, Ed. Baxter, T. F. Black and Sheriff Boals, has been appointed to secure subscriptions.

SHORE PROTECTION, ETC.—Edgewater Park, Cleveland, O.—F. C. Bangs, Clk. Park Comn., informs us that the following bids were received March 23 for constructing a shore protection at Edgewater Park. They were, however rejected:

	Sheet piling shore protection.	Three timber and stone jetties.	Stone jetty.	Total.
Cleveland Contracting Co...	$11.50	$5,300	$15,000	$64,250
Christian J. Engel.....	11.40	5,050	16,100	64,310
L. P. & J. A. Smith Co....	12.00	5,000	15,000	64,800
Williams, Morse & Averill..	12.28	6,716	14,546	70,248

CONTRACT PRICES.

WATER PIPE.—Hallowell, Me.—C. G. Wall, Water Comr., writes us that the David Farnam Mfg. Co., Waltham, Mass., has been awarded the contract for furnishing 18,000 ft. of 6-in., 6,000 ft. of 8-in. and 1,500 ft. of 12-in. cast-iron water pipe, at $18.90 a gross ton, delivered in Hallowell.

PIER WORK.—Pentwater, Mich.—The following bids were received by Capt. C. McD. Townsend, U. S. Engr., Grand Rapids, Mich., March 21, for repairing the pier at Pentwater, as advertised in Engineering News:

Bids Received at Pentwater, Mich., March 21, for Repairs to Government Pier.

Bidder.	Old work cut down, 428 lin. ft.	White oak piles, 2,752 lin. ft.	White oak timber, 4730 ft. B. M.	White pine timber 78,624 ft. B.M.	Plank for sheet piles, 25,050 ft. B. M.	Plank for platform, 9,688 ft. B. M.	Drift bolts, 12,992 lbs.	Screw bolts, 6,089 lbs.	Tie rods, 4,158 lbs.	Spikes, 561 lbs.	Angle irons, 5,616 lbs.	Total.
Nelson J. Gaylord, Ludington, Mich.	$0.60	$0.28	$32.00	$19.50	$25.00	$18.00	$0.02	$0.02	$0.02	$0.02	$0.02	$4,021
Robert B. Rice, Muskegon, Mich.....	.50	.29	40.00	20.00	35.00	15.00	.02	.02½	.02½	.03	.02½	4,413
William Brownrigg, Manistee, Mich...	.77	.325	38.00	20.55	32.15	17.00	.02¼	.02¼	.02¼	.02¼	.02¼	4,583
Lynch & Weimer, Ludington, Mich....	1.00	.28	40.00	21.50	28.00	18.00	.02¼	.028	.028	.03	.03	4,673
Love & West, Muskegon, Mich.	1.75	.28	32.00	18.00	47.00	17.00	.02	.02	.02	.02	.02	4,742
William McIvor, Marseilles, Ill.	1.75	.29	30.50	20.75	30.75	18.50	.02¼	.02¼	.02¼	.02¼	.02¼	4,655
Adolph Green, Green Bay, Wis.	1.95	.31	36.00	20.75	26.50	19.00	.02	.03	.02½	.03	.05	5,097
J. M. Allmendinger, Benton Harbor ..	1.50	.28	32.00	22.00	40.00	20.00	.02	.03	.03	.02¼	.04	5,212

BRICK PAVING.—Saginaw, Mich.—We are informed that the following bids were received March 18 for brick paving; H. E. Terry, Cy. Engr.:

Quantities.		Barber Asp. Paving Co., New York.	Alcatraz Construction Co., New York.	Columbia Construction Co., Syracuse, N. Y.
Jefferson St.:				
Excavation	2,830 cu. yds.	$0.09	$0.15	$0.15
Asphalt pavement	10,460 sq. yds.	1.33	1.38	1.42
Brick pavement	610 " "	.99	1.07	1.00
Tile drain	325 rods....	.45	.65	.75
New curb stone	100 lin. ft..	.50	.45	.60
Curb stone reset	5,200 " "	.01	.05	.10
Retaining timber	2,500 ft. B.M.	13.50	16.00	17.50
Maintenance, per yr., after 5 years..		.04	.04	.04
Hamilton St.:				
Excavation	4,265 cu. yds.	.09	.15	.15
Asphalt pavement	12,885 sq. yds.	1.33	1.38	1.44
Brick pavement	2,500 " "	.99	1.07	1.00
Tile drain	400 rods....	.45	.65	.75
New curb stone	100 lin. ft..	.50	.45	.60
Curb stone reset	6,200 " "	.07	.05	.10
Retaining timber	4,600 ft. B.M.	13.50	16.00	17.50
Maintenance, per yr., after 5 years..		.04	.04	.04

REPAVING.—Atlanta, Ga.—We are informed that the following bids were received March 21 for repaving in Auburn Ave.; R. M. Clayton, Cy. Engr.: Warren-Scharf Asphalt Paving Co., New York—Concrete 6 ins. thick, $2.21 a sq. yd., new stone for concrete, payments within 90 days; concrete 6 ins. thick, using stone now down for making concrete, $2.05 a sq. yd; concrete 4 ins. thick, $1.98 a sq. yd. new stone, $1.78 a sq. yd. using present stone, guaranteed 10 years; concrete 4 ins. thick, $1.87 a sq. yd. new stone, $1.57 a sq. yd. using present stone, guaranteed 5 years; for deferred payments (¼ cash in 1, 2 and 3 years) add 5 cts. a sq. yd. Keiley & Co.—Vitrified brick $2.05 a yd. with new stone, concrete, or $1,35 a sq. yd. using stone now down in making concrete;. Williams Block Paving Co.—Williams block, $2.20 a sq. yd. cash, or $2.25 a sq. yd. time, using stone; $2.00 a sq. yd. cash, or $2.05 a sq. yd. time, using chert instead of concrete; Redmond & Co.—Vitrified brick, $1.79 a sq. yd., asphalt 2 ins. thick $1.95 a sq. yd., 2¼ ins. thick $2.10 a sq. yd., using present stone; J. H. Lasley & Co.—Vitrified brick $2.00 a sq. yd., or $1.76 using present stone; Francis Jones—Granite blocks, $2.10 a sq. yd. cash, or $2.15 a sq. yd. on time.

BRICK PAVING.—Cincinnati, O.—We are informed that the following bids were received by the board of administration March 18 for brick paving in Wilmink St., and the contract awarded to J. M. Quill; Pres., Aug. Herrmann; Asst. Clk., J. D. Harris:

Bids Received at Cincinnati, O., March 18, for Brick Paving.

Quantities.		J. M. Quill, 1062 Pine St.	Delaney & Boerman, 3925 Llewellyn St.	H. Wellman, 2941 Stanton Ave.	D. Folz Asp. Pvg Co., 936 Findlay St.	J. H. Murray & Bro., 531 Clinton St.	J. Evans, 1229 Ida St.	W. Fogarty, 2550 Burnett Ave.	M. T. Flynn, 1052 Clinton Ave.	Van Sandt & Johnson, 1 West 5th St.
Broken stone	10 cu. yds.	$0.01	$1.00	$1.45	$0.01	$0.01	$0.01	$0.01	$0.01	$0.01
Concrete	413 " "	2.20	2.50	2.95	2.10	3.05	3.00	2.00	2.50	2.40
Curbs	50 lin. ft..	.90	1.00	.95	.90	1.00	1.10	.80	1.00	2.0
Circular	50 " "	1.60	2.00	1.50	1.50	2.00	2.00	1.50	2.00	.80
Grading	830 cu. yds.	.01	.30	.01	.01	.01	.01	.01	.01	1.40
Brick	2,480 sq. yds.	.95	1.00	.89	.90	.95	.85	.95	.90	.01
Rebowldering	130 " "	.01	.50	.50	.01	.01	.01	.01	.01	.86
Resetting curbs	100 lin. ft..	.01	.10	.10	.01	.01	.01	.01	.01	.01
Relaying flags	200 " "	.01	.10	.10	.01	.01	.01	.01	.01	.05
Rolling	2,480 sq. yds.	.02	.05	.03	.04	.03	.01	.03	.03	.01
Headers	1,300 lin. ft..	.01½	.30	.45	.28	.32	.01	.30	.20	.02
Manhole covers reset	5 each..	.01	1.00	1.50	.01	1.00	1.00	.01	1.00	.15
Repaving brick	20 sq. yds.	.10	.50	.60	.01	.01	.01	.01	.25	.50
Granite	20 " "	.10	1.00	.60	.01	.01	.01	.01	.25	5.00
									.01	.20
										.20
Total		$3,462	$4,566	$4,357	$3,696	$4,274	$3,558	$3,765	$3,777	$3,579 $3,645

SEWER PIPE.—Minneapolis, Minn.—The following bids were received March 25 for furnishing vitrified clay sewer pipe, etc.:

Items.	Menomonie Hydraulic P. B. Co., Menomonie, Wis.	Union Sewer Pipe Co., Redwing, Minn.
6-in. pipe, a lin. ft.	....	$0.06½
9-in. " "	$0.11¾	.12
12-in. " "	.19	.20
15-in. " "	.26¼	.28
18-in. " "	.38¾	.40
24-in. " "	....	.90
12 × 6-in. Ys, each	.85	1.00
15 × 6-in. " "	1.08	1.40
18 × 6-in. " "	1.75	2.00
24 × 6-in. " "	....	4.05
12-in. curves, each	.73	.73½
15-in. " "	1.04	1.05
18-in. " "	1.25	1.26
24-in. " "	....	2.50
6-in. slants, each	.19	.20

SPECIALS.—Minneapolis, Minn. — The Minneapolis Foundry Co., at $19.95 a ton of 2,000 lbs., was the only bidder for furnishing cast-iron special castings.

INDUSTRIAL NOTES.

MR. WILLIS SHAW, dealer in contractor's machinery, formerly located at 506 New York Life Bldg., Chicago, has moved his office to 633 Marquette Bldg., in that city.

THE UNION CAR CO., Buffalo, N. Y., is reported to have the contract to build 1,000 box cars for the Lehigh Valley R. R. The cars will be of 60,000 lbs. capacity each and will be used for grain carrying.

THE DUNN MFG. CO., Pittsburg, Pa., has established a branch office at Room 128, Illinois Bank Bldg., Dearborn St., Chicago, for the sale and handling of its patent extensible trench braces in that city and vicinity.

THE UNION BRIDGE CO., New York, has the contract for constructing coaling stations for the U. S. Navy at Dry Tortugas and Key West, Fla. There will be two marine piers at Dry Tortugas and one at Key West; cost, $590,000; work to be completed in six months.

FRASER & CHALMERS, Chicago, advise our representative that within one year they have sold Siederholm boilers aggregating over 4,000 HP., and that they now have orders on hand for seven additional boilers ranging from 240 to 350 HP. each, to be used for mining and pumping purposes.

THE BALDWIN LOCOMOTIVE WORKS, Philadelphia, has recently delivered to the Baltimore & Ohio R. R. Co. the remainder of the large order of locomotives placed last fall. This delivery included 20 heavy engines which are now being broken in for service between Cumberland and Baltimore. They are of the style adopted by the Motive Power Department for the First and Second Divisions, are of the consolidation type, with 21 × 26-in. cylinders and the average load that they pull approximates 1,800 tons.

THE CONNERSVILLE BLOWER CO., Connersville, Ind., is busy at present in all departments, and among other orders on hand or recently shipped are the following: A large blower for a smelting works in Mexico; one for the J. I. Case Threshing Machine Co., Racine, Wis.; a large high-pressure blower is also being constructed, to be shipped to Australia, and two No. 8 blowers were recently shipped to Brooklyn, N. Y. Mr. Jos. E. Hinston, Secy. and Treas., advises our representative that they have widened the scope of their business by making extensions and improvements and that they are now prepared to furnish blowers and pumping engines of any capacity.

THE AULTMAN & TAYLOR MACHINERY CO., Mansfield, O., manufacturer of the Cahall vertical water tube boiler and Cahall-Babcock & Wilcox water tube boilers, has recently secured valuable additions to its erecting force in the persons of Messrs W. E. Bickford and J. C. Cooke. Mr. Cooke, who has been located in the Philadelphia district for the past six years as Superintendent of Erection for the Babcock & Wilcox Co., of New York, will have charge of the Erecting Department in Philadelphia and New York. Mr. Bickford has been Superintendent of Erection for the National Water Tube Boiler Co. for the past five years, and will be Superintendent of Erection with headquarters at Mansfield, O.

THE PENNSYLVANIA STEEL CO., Steelton, Pa., has removed its Boston office from 8 Oliver St. to the Mason Bldg., 70 Kilby St., corner of Milk St. The street railway business having increased so in the past few years that the former quarters have been outgrown. Among recent rail contracts is one of 5,000 tons for the Boston Elevated Ry.; 1,500 tons for the Fall River & Newport St. Ry.; 1,800 tons for the Fall River & Providence St. Ry., besides many small orders for other roads. The Bridge and Construction Department business has grown equally fast. Besides the contract for the Southern Terminal Station now rapidly nearing completion and involving nearly 10,000 tons of steel, the company has recently completed the baseball cage for Harvard University, Wellesley Memorial Chapel for Wellesley College, a large steel structure for an apartment house at the corner of Brookline Ave. and Beacon St., Boston, and is erecting the new power station for the Boston Electric Light Co., which is to be one of the largest and finest in the country. The first threee sections of the Boston Subway were furnished by this company and it has recently taken the contract for the last section. The Northern Union Station was built by this company and it is now completing the Southern Union Station.

THE SPRAGUE ELECTRIC CO., which was formed by the consolidation of the Interior Conduit & Insulation Co. and the Sprague Electric Elevator Co., is being rapidly perfected in organization. The main offices of the company are in New York, the Commercial Cable Bldg., and the company recently secured rooms in the Marquette Bldg., Chicago, which will be in charge of Messrs. Millard B. Kitt and E. B. Kittle, long identified with the latter company. Well-known electrical men and houses are being secured to represent the Sprague Company in various sections of the country, and the organization bids fair to be a strong one in every way. The Metropolitan Electric Construction Co. is now doing all of the installation work of the Sprague Electric Co., an arrangement to that effect having been recently closed. The announcement was made in a recent circular in which it was stated that the construction company would not only contract for installation and maintenance of Sprague machinery, but of other machinery as well. The offices of the construction company are also in the Commercial Cable Bldg. The officers are, Mr. W. D. MacQuesten, President and General Manager, and Mr. Wallace E. Carver, Treasurer. An Advertising and Press Bureau is one of the new departments of the Sprague Co., and it has been installed in rooms on the 19th floor of the Commercial Cable Bldg.

"THE BEST YET."

Newport, Ky., March 23, 1898.

Engineering News Publishing Co.,

New York.

Gentlemen: I wish to acknowledge what we believe to be largely due to advertising in your journal: having an unprecedentedly large number of calls for proposals and a large number of bids, resulting in the cheapest street we have ever had put in. The cost per square yard for brick paving filled with asphalt filler on 6 ins. concrete foundation, and including excavation, is $1.17. I think this is a record on cheap paving.

Yours very truly,

W. L. Glazier, City Engineer.

Nearly Every Prominent Contractor and Manufacturer of Contractors' Supplies READS ENGINEERING NEWS

AVAIL YOURSELF OF THIS PAPER WHEN BIDS ARE WANTED FOR CONSTRUCTION OR FOR FURNISHING SUPPLIES.